MNC04 Coal Training Package

This document comprises endorsed components only

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MNC04 Coal Training Package

This volume contains part of the endorsed component of the Coal Training Package. It is one of three volumes and should not be used in isolation of those other volumes.

Volume Ia
- Introduction
- Core Units of Competency
- General Units of Competency

Volume Ib
- Surface/Open Cut Units of Competency
- Coal Preparation Units of Competency
- Imported Units of Competency

Volume II
- Underground Units of Competency
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Preliminary Information

Important Note to Users

Training Packages are living documents. Changes are periodically made to reflect the latest industry practices.

As a user of the Training Package, and before commencing any form of training or assessment, you must ensure delivery is from the current version.

Ensure you are complying with this requirement by:

- checking the version identifier code of the version you currently have (located on the imprint page, just below the copyright statement)
- accessing the Australian Training Products (ATP) web site and comparing the version identifier. This information is displayed in the first few pages of the Training Package.

Where the ATP web site shows a different version, the Modification History, again shown on the ATP web site in the first few pages of the Training Package, will display the changes made in versions. ATP web site for version comparison: http://www.atpl.net.au

The Modification History is also visible on the web site of the developer of the Training Package: www.skillsdmc.com.au

Changes in units of competency and packaging of qualifications are reflected on the National Training Information Service that displays only current information: http://www.ntis.gov.au

Version Modification History

Please refer to the National Training Information Service for the latest version of units of competency and Qualification information (http://www.ntis.gov.au)

COAL TRAINING PACKAGE MNC04

2 16 Jan 2008 NQC

- Inclusion of Employability Skills in all MNC units of competency
- Deletion of Key Competencies in all MNC units of competency
- Inclusion of mandatory texts
- Correction of typing errors i.e:
  - MNCU10676A to MNCU1076A in qualification MNC30307 (Vol Ia/Introduction doc/page 54)
  - MNCG1003A Establish the mine risk assessment and control system to MNCG1003A Establish the risk management system
- MNCC1001A Work safely to MNCC1001B Work safely

  Removed Performance Criteria 2.5 “Identify and use self rescuer equipment in accordance with manufacturer instructions and site procedures (underground)”

  Changes made to Range Statement under Personal protective equipment: “respiratory masks” replaced with “respiratory protection” and added extra dot point “self rescuers”
Version Modification History

- Unit MNCU1046A Conduct winding operations - deleted from the qualification MNC30304 Cert III in Coal in Underground Coal Operations. Qualification code changed to MNC30307 to reflect the above deletion (Vol Ia/Introduction doc/page 54).

- Recoded, renamed and changes made to MNCG1031A Remove, fit and adjust wheels to MNCG1031B Remove and fit wheel assemblies (Vol Ia/Core & General/page 335):
  - Performance Criteria 1.4 amended
  - Deleted “Links outside this unit”
  - Changes to Performance Criteria and Range Statement

- Recoded and changes made to MNCG1032A Remove, repair and refit tyres and tubes to MNCG1032B Remove, repair and refit tyres and tubes (Vol Ia/Core & General/page 343):
  - Deleted “Links outside this unit”
  - Changes to Performance Criteria and Range Statement
  - Removed Element 4 “Add and remove ballast”

- Recoded and changes made to unit MNCG1002A Implement and apply risk management processes to MNCG1002B Implement and apply risk management processes (Vol Ia/Core & General/page 211):
  - Rephased “Links outside this unit” paragraph to allow Qld and NSW standards to be used where appropriate

- MNCG1060A Operate support equipment - Included in MNC20204 Certificate II in Coal Preparation (Vol Ia/Introduction/page 44) and MNC30204 Certificate III in Coal Preparation (Vol Ia/Introduction/page 52).

- Mapping of changes from MNC98 to MNC04 updated to show that the units MNCG1061A Operate light vehicle; MNCG1062A Operate medium vehicle to and MNCG1063A Operate heavy rigid vehicle from the MNC04 Training Package are not equivalent to the units MNC.G61.A Operate light vehicle; MNC.G62.A Operate medium vehicle to and MNC.G63.A Operate heavy rigid vehicle
• Replaced 8 MNM99 V3 units with MNM05 V1 units (Vol Ib/Imported Units of Competency/pages 1443 – 1498):
  − MNMUGC1216A to MNMULH204A Conduct skip operations
  − MNMUGC1217A to MNMULH205A Operate automated winder
  − MNMUGC1218A to MNMULH306A Operate manual winder
  − MNMUGC224A to MNMULH311A Conduct case operations
  − MNMUGC225A to MNMULH312A Operate winder for shaft sinking
  − MNMUGC226A to MNMULH313A Maintain winder equipment
  − MNMUGC227A to MNMULH314A Inspect and maintain shafts and structures
  − MNMUGC228 A to MNMULH315A Monitor, inspect and service ropes and attachments

• Recoded unit MNCC1006A Conduct local risk assessment to MNCC1006B Conduct local risk assessment (Vol Ia/Core & General/page 187). Reinstated Performance Criteria as PC 2.5 “Risk level (likelihood and consequence combined) is considered and determined.”

• Recoded unit MNCO1040A to MNCO1040B Conduct shotfiring operations (Vol Ib/Imported Units/page 843), changes made to the following:
  − Performance Criteria
  − Range Statement
  − Evidence Guide

• Recoded unit MNCO1041A to MNCO1041B Support shotfiring operations (Vol Ib/Imported Units/page 851). Changes made to the following:
  − Performance Criteria
  − Range Statement
  − Evidence Guide

• Recoded unit MNCU1048A to MNCU1048B Conduct shotfiring (Vol II/Underground/page 1799). Changes made to the following:
  − Performance Criteria
  − Range Statement
  − Evidence Guide

• Recoded unit MNCU1049A to MNCU1049B Support shotfiring operations (Vol II/Underground/page 1807). Changes made to the following:
  − Range Statement
  − Evidence Guide
• Qualification MNC20104 Cert II in Surface Coal Operations:
  − Recoded to MNC20107 Cert II in Surface Coal Operations (Vol Ia/Introduction/page 41)
  − Packaging rules revised for Elective component: 5 units to be completed – 2 from Open Cut and 1 from General function and 2 from General or import from other endorsed training package

• Qualification MNC20304 Cert II in Underground Coal Operations:
  − Recoded to MNC20307 Cert II in Underground Coal Operations (Vol Ia/Introduction/page 45 – 47)
  − Changes made to the following units:
    o MNCC1006B Conduct local risk assessment
    o MNCG1031B Remove and fit wheel assemblies
    o MNCG1032B Remove, repair and refit tyres and tubes
    o MNCU1049B Support shotfiring operations

• Qualification MNC30104 Certificate III in Surface Coal Operations.
  − Amended qualification title to MNC30104 Certificate III in Surface Coal Mining Operations as per NTIS (Vol Ia/Introduction/page 49)

• Qualification MNC30304 Cert III in Underground Coal Operations:
  − Recoded to MNC30307 Cert III in Underground Coal Operations (Vol Ia/Introduction/page 53)
  − Deleted unit MNCU1046A Conduct winding operations
  − Replaced 8 MNM99 V3 units with MNM05 V1 units

• Assessment Guidelines updated with mandatory text subject to industry acceptance

• BSZ units replaced with TAA units (Standard 7.3 in Assessment Guidelines) (Vol Ia/Introduction/page 93).

• Corrected all UTE NES imported unit codes from:
  UTENES012ZA to UTENES012 (A to Z qualifier) A
  UTENES107ZA to UTENES107 (A to Z qualifier) A
  UTENES214ZA to UTENES214 (A to Z qualifier) A
  UTENES215ZA to UTENES215 (A to Z qualifier) A
  UTENES303BA to UTENES303 (A to Z qualifier) A
  UTENES304BA to UTENES304 (A to Z qualifier) A
  UTENES404BA to UTENES404 (A to Z qualifier) A
  UTENES406BA to UTENES406 (A to Z qualifier) A
  UTENES407ZA to UTENES407 (A to Z qualifier) A
  UTENES408ZA to UTENES408 (A to Z qualifier) A
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UTENES410ZA to UTENES410 (A to Z qualifier) A
UTENES503BA to UTENES503 (A to Z qualifier) A
UTENES504BA to UTENES504A
UTENES602BA to UTENES602 (A to Z qualifier) A
UTENES603BA to UTENES603 (A to Z qualifier) A
UTENES604BA to UTENES604 (A to Z qualifier) A
UTENES605BA to UTENES605 (A to Z qualifier) A
UTENES606BA to UTENES606 (A to Z qualifier) A
UTENES609ZA to UTENES609 (A to Z qualifier) A
UTENES701BA to UTENES701 (A to Z qualifier) A
UTENES705ZA to UTENES705 (A to Z qualifier) A
UTENES707ZA to UTENES707 (A to Z qualifier) A
UTENES708ZA to UTENES708 (A to Z qualifier) A

1.00 05 May 2004

NTQC Coal Training Package.

- Revision and re-titling of Black Coal Training Package.
- Coal Training Package (MNC04) to include Black Coal and Brown Coal Sector
- All qualifications revised
- Total of 18 qualifications
### Summary of AQF qualifications in MNC04

The following are the titles for the qualifications in the Coal Training Package (MNC04):

<table>
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<th>Qualification</th>
<th>Code</th>
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<td>MNC20107</td>
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<tr>
<td>Certificate II in Coal Preparation</td>
<td>MNC20204</td>
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<tr>
<td>Certificate II in Underground Coal Operations</td>
<td>MNC20307</td>
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<tr>
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<td>MNC30104</td>
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<td>MNC50404</td>
</tr>
<tr>
<td>Diploma of Mine Surveying</td>
<td>MNC50504</td>
</tr>
<tr>
<td>Advanced Diploma of Surface Coal Mining Management</td>
<td>MNC60104</td>
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<td>Advanced Diploma of Underground Coal Mining Management</td>
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<tr>
<td>Advanced Diploma of Mine Electrical Engineering</td>
<td>MNC60404</td>
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Summary of Units of Competency for MNC04

Core Units of Competency
MNCC1001B Work safely
MNCC1005A Comply with site work systems/procedures
MNCC1006B Conduct local risk assessment
MNCC1007A Communicate in the workplace

General Units of Competency
MNCG1000A Conduct mine surveying operations
MNCG1001A Apply risk management processes
MNCG1002B Implement and apply risk management processes
MNCG1003A Establish the risk management system
MNCG1004A Respond to local emergencies and incidents
MNCG1005A Conduct fire team operations
MNCG1006A Incorporate health and hygiene factors into mine management
MNCG1007A Implement and monitor health and hygiene management systems
MNCG1008A Conduct safety and health investigations
MNCG1009A Communicate information
MNCG1010A Assess and implement life support systems and stabilise casualties
MNCG1011A Extricate and transport people involved in incidents
MNCG1012A Maintain bathroom hygiene
MNCG1013A Apply initial response First Aid
MNCG1025A Access, update and retrieve simple computerised information
MNCG1026A Operate a computer to produce documents
MNCG1027A Use keyboard skills and advanced functions of software packages to produce complex documents
MNCG1028A Use advanced functions of software packages to produce documents, reports and worksheets
MNCG1029A Transfer information through a computer
MNCG1030A Conduct purchasing
MNCG1031B Remove and fit wheels assemblies
MNCG1032B Remove, repair and refit tyres and tubes
MNCG1033A Conduct lifting operations
MNCG1035A Apply operational maintenance skills
MNCG1036A Provide support to electrical tradesperson
MNCG1037A Service mine plant and equipment
MNCG1038A Perform basic cutting and welding
MNCG1040A Operate gantry crane
MNCG1041A Conduct non-slewing crane operations
MNCG1042A Conduct slewing crane operations
MNCG1043A Conduct dogging operations
MNCG1044A Conduct basic rigging operations
MNCG1045A Conduct intermediate rigging operations
MNCG1046A Conduct basic scaffolding operations
MNCG1047A Conduct intermediate scaffolding operations
MNCG1048A Conduct forklift operations
MNCG1049A Operate elevating work platform
MNCG1050A Operate vehicle loading crane
MNCG1055A Extend, retract and maintain conveyor componentry
**General Units of Competency**

MNCG1056A Install, commission and maintain major conveyor equipment and systems
MNCG1057A Repair and splice conveyor belting
MNCG1060A Operate support equipment
MNCG1061A Operate light vehicle
MNCG1062A Operate medium vehicle
MNCG1063A Operate heavy rigid vehicle
MNCG1064A Operate articulated vehicle
MNCG1065A Operate multi-combination vehicles on mine sites
MNCG1068A Test operational functions of mine vehicles and equipment
MNCG1069A Conduct conveyor-car high wall mining operations
MNCG1081A Implement, monitor, rectify and report on contracts
MNCG1082A Implement, monitor, rectify and report on inventory control system
MNCG1083A Implement, monitor, rectify and report on maintenance management systems
MNCG1084A Implement, monitor, rectify and report on mobile plant and equipment systems
MNCG1090A Establish and maintain the mine electrical installations, reticulation and protection system
MNCG1091A Implement, monitor, rectify and report on interfaces between electrical and mechanical componentry
MNCG1101A Establish and maintain the environmental management system
MNCG1102A Establish the statutory compliance management system
MNCG1103A Implement and maintain management systems to control risk
MNCG1105A Apply the mine occupational health and safety management plan
MNCG1107A Establish and maintain the mine Occupational Health and Safety management system
MNCG1111A Establish and maintain the quality system
MNCG1113A Apply quality management system
MNCG1116A Establish mine emergency preparedness and response systems
MNCG1119A Manage major incidents and emergencies
MNCG1125A Initiate, monitor and supervise contracts
MNCG1126A Conduct business negotiations
MNCG1128A Establish mine mechanical plant services and infrastructure systems
MNCG1129A Establish mechanical standard and engineering practices for transport and production equipment
MNCG1130A Establish maintenance management system for mechanical plant and equipment

**Imported General Units**

BSBCMN215A Participate in environmental work practices
BSBCMN313A Maintain environmental procedures
BSBFLM302A Support leadership in the workplace
BSBFLM303A Contribute to effective workplace relationships
BSBFLM304A Participate in work teams
BSBCMN402A Develop work priorities
BSBCMN404A Develop teams and individuals
BSBCMN410A Coordinate implementation of customer service strategies
BSBFLM402A Show leadership in the workplace
**Imported General Units**

- BSBFLM403A Menage effective workplace relationships
- BSBFLM404A Lead work teams
- BSBFLM405A Implement operational plan
- BSBFLM409A Implement continuous improvement
- BSBCM412A Promote innovation and change
- BSBFLM501A Manage personal work priorities and professional development
- BSBFLM502A Provide leadership in the workplace
- BSBFLM503A Establish effective workplace relationships
- BSBFLM504A Facilitate work teams
- BSBFLM505A Manage operational plan
- BSBFLM506A Manage workplace information systems
- BSBFLM507A Manage quality customer service
- BSBFLM509A Promote continuous improvement
- BSBFLM510A Facilitate and capitalise on change and innovation
- BSBFLM511A Develop a workplace learning environment
- BSBSBM401A Establish business and legal requirements
- BSBSBM402A Undertake financial planning
- BSBSBM406A Manage finances
- BSBMGT502A Manage people performance
- BSBMGT503A Prepare budgets and financial plans
- BSBMGT504A Manage budgets and financial plans
- BSBMGT601A Contribute to strategic direction
- BSBMGT602A Contribute to the development and implementation of strategic plans
- BSBMGT603A Review and develop business plans
- BSBMGT604A Manage business operations
- BSBMGT605A Provide leadership across the organisation
- BSBMGT607A Manage knowledge and information
- BSBMGT608A Manage innovation and continuous improvement
- BSBMGT610A Manage environmental management systems

**Underground Units of Competency**

- MNCU1011A Conduct underground lifting operations
- MNCU1012A Operate power tram
- MNCU1013A Conduct rail vehicle operations
- MNCU1014A Conduct tracked vehicle/plant operations
- MNCU1015A Conduct wheeled vehicle operations (non-articulated)
- MNCU1016A Conduct wheeled grader operations
- MNCU1017A Conduct wheeled vehicle operations (articulated)
- MNCU1026A Conduct environmental monitoring
- MNCU1037A Escape from hazardous situation unaided
- MNCU1038A Provide aided rescue to endangered personnel
- MNCU1039A Respond to in-seam incident
- MNCU1040A Install, maintain and recover gas drainage systems
- MNCU1041A Install, maintain and recover electrical services
- MNCU1042A Install, maintain and recover water and air systems
- MNCU1044A Conduct special roadway operations
- MNCU1045A Recover equipment
- MNCU1048B Conduct shotfiring
- MNCU1049B Support shotfiring operations
- MNCU1050A Conduct rotational drilling
Underground Units of Competency

MNCU1051A Conduct directional drilling
MNCU1053A Conduct basic strata control operations
MNCU1054A Conduct specialised strata control operations
MNCU1060A Conduct roadway maintenance
MNCU1061A Conduct stonedusting operations
MNCU1062A Dewater roadways and work areas
MNCU1063A Lay and recover rail
MNCU1064A Install and maintain explosion barriers
MNCU1065A Construct and maintain basic ventilation devices
MNCU1066A Construct and maintain ventilation devices
MNCU1070A Conduct continuous miner operations
MNCU1071A Conduct shuttle car operations
MNCU1072A Conduct feeder breaker operations
MNCU1073A Conduct face ventilation operations
MNCU1074A Conduct outburst mining operations
MNCU1075A Conduct shearer operations
MNCU1076A Conduct longwall face equipment operations
MNCU1077A Operate longwall ancillary equipment
MNCU1078A Install and recover longwall equipment
MNCU1079A Operate breaker line supports
MNCU1080A Conduct flexible conveyor train (FCT) operations
MNCU1091A Maintain lamp cabin operations
MNCU1095A Monitor control processes
MNCU1101A Apply spontaneous combustion management measures
MNCU1102A Establish the spontaneous combustion management plan
MNCU1103A Implement the spontaneous combustion management plan
MNCU1104A Apply the spontaneous combustion management plan
MNCU1106A Establish the ventilation management plan
MNCU1107A Implement the ventilation management plan
MNCU1108A Apply and monitor the ventilation management plan
MNCU1109A Manage, operate and maintain the mine ventilation system
MNCU1111A Establish the gas management system
MNCU1112A Implement the gas management plan
MNCU1113A Apply and monitor the gas management plan
MNCU1116A Establish the gas drainage management plan
MNCU1117A Implement the gas drainage management plan
MNCU1118A Apply and monitor the gas drainage management plan
MNCU1121A Establish the outburst management plan
MNCU1122A Implement the outburst management plan
MNCU1123A Apply and monitor the outburst management plan
MNCU1126A Establish the inrush management plan
MNCU1127A Implement the inrush management plan
MNCU1128A Apply and monitor the inrush management plan
MNCU1131A Establish the mining method and strata management systems
MNCU1132A Implement strata management plan
MNCU1133A Apply and monitor the strata management plan
MNCU1136A Establish mine transport systems and production equipment
MNCU1137A Implement mine transport systems and production equipment
MNCU1138A Apply and monitor mine transport systems and production equipment
MNCU1141A Establish mine services and infrastructure systems
Underground Units of Competency
MNCU1142A Implement mine services and infrastructure systems
MNCU1143A Apply and monitor mine services and infrastructure systems
MNCU1151A Establish mine emergency preparedness and response systems
MNCU1152A Implement mine emergency management system
MNCU1153A Apply and monitor mine emergency preparedness and response systems
MNCU1155A Establish an underground mine mechanical plant management system
MNCU1156A Implement the underground mine mechanical plant management plan

Underground Units Imported from the Metalliferous Mining Training Package MNM05
MNMULH204A Conduct skip operations
MNMULH205A Operate automated winder
MNMULH306A Operate manual winder
MNMULH311A Conduct cage operations
MNMULH312A Operate winder for shaft sinking
MNMULH313A Maintain winder equipment
MNMULH314A Inspect and maintain shafts and structures
MNMULH315A Monitor, inspect and service ropes and attachments

Surface/Open Cut Units of Competency
MNCO1010A Conduct dragline operations
MNCO1011A Conduct burden and coal drilling operations
MNCO1012A Conduct rope shovel operations
MNCO1013A Conduct front end loader operations
MNCO1014A Conduct haul truck operations
MNCO1015A Conduct bulk water truck operations
MNCO1016A Conduct grader operations
MNCO1017A Conduct scraper operations
MNCO1018A Conduct dozer operations
MNCO1019A Conduct surface miner operations
MNCO1020A Conduct auger miner operations
MNCO1021A Conduct bucketwheel operations
MNCO1022A Conduct spreader operations
MNCO1023A Support bucketwheel system operations
MNCO1024A Conduct wheeled dozer operations
MNCO1025A Lay and recover cables and hoses
MNCO1026A Conduct dewatering operations
MNCO1027A Conduct hydraulic/shovel excavator operations
MNCO1028A Conduct conveyor operations
MNCO1029A Conduct mobile slew conveyor operations
MNCO1030A Conduct control centre operations
MNCO1031A Coordinate conveyor system shift
MNCO1032A Isolate and access plant
MNCO1033A Conduct conveyor shifting dozer operations
MNCO1036A Conduct mobile crushing and screening plant operations
MNCO1040B Conduct shotfiring operations
MNCO1041B Support shotfiring operations
MNCO1042A Examine and maintain mine safety
MNCO1043A Monitor interaction of light and heavy vehicles and mining
Surface/Open Cut Units of Competency

- MNCO1044A Manage laser levelling of operating plant
- MNCO1045A Apply and monitor environmental management policies, plans and procedures
- MNCO1046A Apply and monitor systems and methods of mining
- MNCO1047A Manage the interaction of heavy and light vehicles and mining equipment
- MNCO1101A Plan pit development
- MNCO1102A Implement pit plan
- MNCO1103A Apply pit plan
- MNCO1105A Establish the mine water management system
- MNCO1106A Implement the site water management plan
- MNCO1107A Apply and monitor the site water management plan
- MNCO1110A Establish the mine stockpile management system
- MNCO1111A Implement the stockpile management plan
- MNCO1112A Apply and monitor the site stockpile management plan
- MNCO1115A Apply and monitor surface mine emergency preparedness and response procedures
- MNCO1116A Implement mine plant and resource management plan
- MNCO1117A Apply and monitor site plant and resource management plan
- MNCO1118A Supervise coal processing operations
- MNCO1120A Establish waste and by-product management system
- MNCO1121A Implement site waste and by-product management plan
- MNCO1122A Apply and monitor site waste and by-products management plan
- MNCO1125A Establish plant, equipment and infrastructure maintenance system
- MNCO1126A Implement and maintain the site plant, equipment and infrastructure maintenance plan
- MNCO1127A Apply and monitor site plant, equipment and infrastructure maintenance management plan
- MNCO1130A Establish mine services system
- MNCO1131A Implement mine services systems
- MNCO1135A Establish ground control and slope stability system
- MNCO1140A Establish the mine infrastructure and fixed plant systems
- MNCO1142A Implement mine fixed plant and infrastructure systems
- MNCO1145A Establish a surface mine mechanical plant management system
- MNCO1146A Implement the surface mine mechanical plant management plan

Coal Preparation Units of Competency

- MNCP1001A Handle raw coal
- MNCP1002A Monitor coal preparation plant operations
- MNCP1003A Control coal preparation plant operations
- MNCP1004A Treat and dispose of rejects and tailings
- MNCP1005A Conduct sampling operations
- MNCP1006A Conduct stockpile dozer operations
- MNCP1007A Conduct stockpile reclaimer operations
- MNCP1008A Conduct rail dispatch operations
- MNCP1009A Perform plant operational maintenance

Units Imported from the Electrotechnology Training Package (UTE99 V3.03)
## Units Imported from the Electrotechnology Training Package (UTE99 V3.03)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTENES010A</td>
<td>Report on the integrity of explosion-protected equipment in hazardous areas</td>
</tr>
<tr>
<td>UTENES012 (A to Z qualifier) A</td>
<td>Attend to breakdowns in hazardous areas</td>
</tr>
<tr>
<td>UTENES107 (A to Z qualifier) A</td>
<td>Install explosion-protected equipment and wiring systems</td>
</tr>
<tr>
<td>UTENES214 (A to Z qualifier) A</td>
<td>Maintain equipment in hazardous areas</td>
</tr>
<tr>
<td>UTENES215 (A to Z qualifier) A</td>
<td>Overhaul and repair explosion-protected equipment</td>
</tr>
<tr>
<td>UTENES303 (A to Z qualifier) A</td>
<td>Undertake commissioning of apparatus and systems’ circuits</td>
</tr>
<tr>
<td>UTENES304 (A to Z qualifier) A</td>
<td>Undertake commissioning of advanced systems and apparatus</td>
</tr>
<tr>
<td>UTENES404 (A to Z qualifier) A</td>
<td>Assess electrical/electronic apparatus</td>
</tr>
<tr>
<td>UTENES406 (A to Z qualifier) A</td>
<td>Develop complex testing and evaluation procedures</td>
</tr>
<tr>
<td>UTENES407 (A to Z qualifier) A</td>
<td>Assess explosion-protected equipment for conformance with standards</td>
</tr>
<tr>
<td>UTENES408 (A to Z qualifier) A</td>
<td>Test installations in hazardous areas</td>
</tr>
<tr>
<td>UTENES409 (A to Z qualifier) A</td>
<td>Inspect visually existing hazardous area installations</td>
</tr>
<tr>
<td>UTENES410 (A to Z qualifier) A</td>
<td>Inspect in detail hazardous area installations</td>
</tr>
<tr>
<td>UTENES503 (A to Z qualifier) A</td>
<td>Diagnose and rectify faults in apparatus and systems’ circuits</td>
</tr>
<tr>
<td>UTENES504A</td>
<td>Diagnose and rectify faults in advanced systems and apparatus</td>
</tr>
<tr>
<td>UTENES602 (A to Z qualifier) A</td>
<td>Develop commissioning programs for apparatus and circuits</td>
</tr>
<tr>
<td>UTENES603 (A to Z qualifier) A</td>
<td>Develop maintenance programs for apparatus and circuits</td>
</tr>
<tr>
<td>UTENES604 (A to Z qualifier) A</td>
<td>Coordinate and manage commissioning processes</td>
</tr>
<tr>
<td>UTENES605 (A to Z qualifier) A</td>
<td>Coordinate and manage routine maintenance</td>
</tr>
<tr>
<td>UTENES606 (A to Z qualifier) A</td>
<td>Coordinate and manage installation projects</td>
</tr>
<tr>
<td>UTENES609 (A to Z qualifier) A</td>
<td>Develop and manage maintenance programs for hazardous area electrical equipment</td>
</tr>
<tr>
<td>UTENES701 (A to Z qualifier) A</td>
<td>Redesign and develop modifications to apparatus and systems’ circuits</td>
</tr>
<tr>
<td>UTENES705 (A to Z qualifier) A</td>
<td>Design and develop modifications to explosion-protected equipment</td>
</tr>
<tr>
<td>UTENES707 (A to Z qualifier) A</td>
<td>Design electrical installations in hazardous areas</td>
</tr>
<tr>
<td>UTENES708 (A to Z qualifier) A</td>
<td>Design explosion-protected electrical systems</td>
</tr>
</tbody>
</table>
Units imported from the Property Development and Management Training Package (PRD01)

PRDSIS03A  Implement a project plan
PRDSIS04A  Determine spatial data requirements to meet the deliverables
PRDSIS05A  Determine suitable sources of information for the creation of new spatial data sets
PRDSIS06A  Plan data collection and validation
PRDSIS07A  Capture new data
PRDSIS08A  Obtain and validate existing data
PRDSIS13A  Design a spatial data storage system
PRDSIS14A  Integrate spatial data sets
PRDSIS15A  Maintain spatial data
PRDSIS16A  Store and retrieve spatial data
PRDSIS18A  Produce project deliverables
PRDSIS19A  Collate and interpret data
PRDSIS20A  Design project deliverables
PRDSIS22A  Control and monitor the spatial components of the project
PRDSIS24A  Maintain financial records
PRDSIS25A  Lead and supervise teams
PRDSIS27A  Maintain client relations
PRSIR39A  Manage occupational health and safety in the workplace
PRSIR31A  Undertake process improvement to reduce costs and improve quality service

Explanation of the review date

The review date (shown on the title page and in the footer of each page) indicates when the Training Package is expected to be reviewed in the light of changes such as changing technologies and circumstances. The review date is not an expiry date. Endorsed Training Packages and their components remain current until they are reviewed or replaced.
Overview of Training Packages

What is a Training Package?

A Training Package is an integrated set of nationally endorsed competency standards, assessment guidelines and Australian Qualifications Framework (AQF) qualifications for a specific industry, industry sector or enterprise.

Each Training Package:
- provides a consistent and reliable set of components for training, recognising and assessing people’s skills, and may also have optional support materials;
- enables nationally recognised qualifications to be awarded through direct assessment of workplace competencies;
- encourages the development and delivery of flexible training which suits individual and industry requirements; and
- encourages learning and assessment in a work-related environment which leads to verifiable workplace outcomes.

How do Training Packages fit within the National Training Framework?

The National Training Framework is made up of the nationally agreed quality arrangements for the vocational education and training sector, the Australian Quality Training Framework (AQTF), and Training Packages endorsed by the National Training Quality Council (NTQC).

How are Training Packages developed?

Training Packages are developed by Industry Skills Councils or enterprises to meet the identified training needs of specific industries or industry sectors. To gain national endorsement of Training Packages, developers must provide evidence of extensive research, consultation and support within the industry area or enterprise.

How do Training Packages encourage flexibility?

Training Packages describe the skills and knowledge needed to perform effectively in the workplace without prescribing how people should be trained.

Training Packages acknowledge that people can achieve vocational competency in many ways by emphasising what the learner can do, not how or where they learned to do it. For example, some experienced workers might be able to demonstrate competency against the units of competency, and even gain a qualification, without completing a formal training program.

With Training Packages, assessment and training may be conducted at the workplace, off-the-job, at a training organisation, during regular work, or through work experience, work placement, work simulation or any combination of these.
Who can deliver and assess using Training Packages?

Training and assessment using Training Packages must be conducted by a Registered Training Organisation (RTO) that has the qualifications or specific units of competency on its scope of registration, or that works in partnership with another RTO as specified in the AQTF Standards for Registered Training Organisations.

Training Package Components

Training Packages are made up of mandatory components endorsed by the NTQC, and optional support materials.

Training Package Endorsed Components

The nationally endorsed components include the Competency Standards, Assessment Guidelines and Qualifications Framework. These form the basis of training and assessment in the Training Package and, as such, they must be used.

Competency Standards

Each unit of competency identifies a discrete workplace requirement and includes the knowledge and skills that underpin competency as well as language, literacy and numeracy; and occupational health and safety requirements. The units of competency must be adhered to in training and assessment to ensure consistency of outcomes.

Assessment Guidelines

The Assessment Guidelines provide an industry framework to ensure all assessments meet industry needs and nationally agreed standards as expressed in the Training Package and the Standards for Registered Training Organisations. The Assessment Guidelines must be followed to ensure the integrity of assessment leading to nationally recognised qualifications.
Qualifications Framework

Each Training Package provides details of those units of competency that must be achieved to award AQF qualifications. The rules around which units of competency can be combined to make up a valid AQF qualification in the Training Package are referred to as the ‘packaging rules’. The packaging rules must be followed to ensure the integrity of nationally recognised qualifications issued.

Training Package Support Materials

The endorsed components of Training Packages are complemented and supported by optional support materials that provide for choice in the design of training and assessment to meet the needs of industry and learners.

Training Package support materials can relate to single or multiple units of competency, an industry sector, a qualification or the whole Training Package. They tend to fall into one or more of the categories illustrated below.

<table>
<thead>
<tr>
<th>Support Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Strategy</td>
</tr>
<tr>
<td>Assessment Materials</td>
</tr>
<tr>
<td>Professional Development Materials</td>
</tr>
</tbody>
</table>

Training Package support materials are produced by a range of stakeholders such as RTOs, individual trainers and assessors, private and commercial developers and Government agencies.

Where such materials have been quality assured through a process of ‘noting’ by the NTQC, they display the following official logo. Noted support materials are listed on the National Training Information Service (NTIS), together with a detailed description and information on the type of product and its availability (www.ntis.gov.au).

It is not compulsory to submit support materials for noting; any resources that meet the requirements of the Training Package can be used.

Training Package, Qualification and Unit of Competency Codes

There are agreed conventions for the national codes used for Training Packages and their components. Always use the correct codes, exactly as they appear in the Training Package, and with the title always following the code.
Training Package Codes

Each Training Package has a unique five-character national code assigned when the Training Package is endorsed, for example MNC04. The first three characters are letters identifying the Training Package industry coverage and the last two characters are numbers identifying the year of endorsement.

Qualification Codes

Within each Training Package, each qualification has a unique eight-character code, for example MNC50204. The first three letters identify the Training Package; the first number identifies the qualification level (noting that arabic numbers are not used in qualification titles themselves); the next two numbers identify the position in the sequence of the qualification at that level; and the last two numbers identify the year in which the qualification was endorsed. (Where qualifications are added after the initial Training Package endorsement, the last two numbers may differ from other Training Package qualifications as they identify the year in which those particular qualifications were endorsed.)

Unit of Competency Codes

Within each Training Package, each unit of competency has a unique code. The unit of competency codes are assigned when the Training Package is endorsed, or when new units of competency are added to an existing endorsed Training Package.

A typical code is made up of 12 characters, normally a mixture of uppercase letters and numbers, as in MNCU1050A. The first three characters signify the Training Package (in this example: MNC04 Coal Training Package) and up to eight characters, relating to an industry sector, function or skill area, follow. The last character is always a letter and identifies the unit of competency version. The ‘A’ in the example above indicates that this is the original unit of competency. An incremented version identifier usually means that minor changes have been made. Typically this would mean that wording has changed in the range statement or evidence guide, providing clearer intent. Where changes are made that alter the outcome, a new code is assigned and the title is changed.

Training Package, Qualification and Unit of Competency Titles

There are agreed conventions for titling Training Packages and their components. Always use the correct titles, exactly as they appear in the Training Package, and with the code always placed before the title.

Training Package Titles

The title of each endorsed Training Package is unique and relates the Training Package’s broad industry coverage.
Qualification Titles

The title of each endorsed Training Package qualification is unique. Qualification titles use the following sequence:

- firstly, the qualification is identified as either Certificate I, Certificate II, Certificate III, Certificate IV, Diploma or Advanced Diploma;
- this is followed by the words ‘in’ for Certificates I to IV and ‘of’ for Diploma and Advanced Diploma;
- then the industry descriptor follows, for example Underground Coal Operations; and
- if applicable, the occupational or functional stream follows in brackets, for example (Surface/Open Cut).

For example:
- Certificate IV in Surface Coal Mining (Open Cut Examiner) MNC40104
- Advanced Diploma of Underground Coal Mining Management MNC60204

Unit of Competency Titles

Each unit of competency title is unique. Unit of competency titles describe the competency outcome concisely, and are written in sentence case.

For example:
- MNCU1050A Conduct rotational drilling
- MNCO1020A Conduct auger miner operations
Introduction

The Coal Training Package

The Coal Training Package MNC04 has been developed as a result of extensive industry consultation and validation. This Training Package has been revised to address the needs of all aspects of the brown and black coal industry, including underground coal mining, open cut/surface coal mining and coal preparation and treatment. The industry has embraced the principles of determining endorsed components of Training Packages and support resources and recognises the benefit Training Package implementation has in meeting regulatory requirements.

The Industry

Coal is mined in all Australian States.

In the Eastern States coal is dominant amongst the export industries. One hundred and ninety four million tonnes were exported in 2000-01, worth nearly $11 billion. Australia's high-quality, low sulphur coals attract overseas buyers who are conscious of the need to minimise environmental impacts.

Queensland is the major producer of coal with an output at 138 million tonnes, 117 million tonnes of which go to export.

In NSW the major mining activity is black coal. The upper Hunter Valley supplies 80 per cent of New South Wales's coal. Production in 2000-01 was 110 million tonnes with over 75 million tonnes being exported. A feature of the NSW mining industry is its downstream minerals processing. Coal meets up with iron ore at Port Kembla where it becomes iron and steel at one of the largest metal producing facilities in the country. NSW's coal also supplies the electricity for one of the nation's largest aluminium smelters at Tomago in the Hunter Valley.

Victoria's major mineral assets are its reserves of brown coal. The total brown coal economic demonstrated resource is the state's Latrobe Valley is estimated to be 380,000 million tonnes. Power supplies from the Latrobe Valley and Anglesea deposits play a major part in the national mineral industry picture.

Australia's mining industry directly employs 78,000 people. In addition 336,000 manufacturing jobs, in areas such as metal products, non-metallic mineral products and petroleum and coal and chemical products, are based on Australia's minerals and energy products.

Although the demand for most commodities is increasing, global consolidation and fluctuating commodity prices and demand have meant the mining industry has focussed on improving efficiency and safety operations and moved towards increasing diversity and integration worldwide.

Australia's mineral industries are dealing with new challenges in environmental protection and land rights issues and mining companies have responded positively.
Training Package Development Process

Wide industry consultation in Stage 1 Review of the Coal Training Package MNC98 recommended continuous improvement of the Coal Training Package to include:

- the review and subsequent redevelopment of existing competency standards
- replacing existing units of competency, where appropriate, with other industry or cross industry standards
- development of additional standards or amendment of existing standards to incorporate skill and sectorial gaps within the Training Package
- the revision and modification of existing qualification structures to better meet industry requirements
- the revision of the Assessment Guidelines.

The extensive industry consultation in Stage 2 Review of the Black Coal Training Package MNC98 provided a detailed review of all units of competency. These consultations provided input from over 200 industry representatives. The variety of consultative processes used included:

- direct participation by stakeholders in workshops and focus groups held in Queensland, New South Wales and Victoria as well as joint focus groups involving representatives from New South Wales, Queensland and Victoria
- face-to-face interviews with stakeholders in Queensland, New South Wales and Victoria
- site visits to mines in Queensland, New South Wales and Victoria
- formal written submission from stakeholders at mine sites and regulatory authorities
- telephone and email discussions with stakeholders in Queensland, New South Wales, and Victoria.

There has been direct industry participation in the development of new competency standards, the packaging of units of competency into qualifications, the revision of the Assessment Guidelines and the validation of revised and new units of competency.

State involvement has been generated via the State ITAB network and industry associations. Regulatory requirements vary from State to State and theses were addressed through consultation with State Regulatory Authorities and industry representatives.

A Coal Steering Committee was appointed to oversee the development process. The Coal Steering comprised of the following people.

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ted Waghorne (Chair)</td>
<td>GDH Pty Ltd</td>
</tr>
<tr>
<td>Rod Brownsey</td>
<td>DEITR Queensland</td>
</tr>
<tr>
<td>Daryl Calvert</td>
<td>BMA</td>
</tr>
<tr>
<td>Grant Cook</td>
<td>Queensland Mining Council</td>
</tr>
<tr>
<td>Greg Dalliston</td>
<td>CFMEU M&amp;E Queensland</td>
</tr>
<tr>
<td>Terry Fisher</td>
<td>Department of Natural Resources &amp; Mines Qld</td>
</tr>
<tr>
<td>Bob Gibbons</td>
<td>Joint Coal Board NSW</td>
</tr>
<tr>
<td>Mark Heaton</td>
<td>Drayton Coal</td>
</tr>
<tr>
<td>John Hempenstall</td>
<td>Centennial Coal</td>
</tr>
</tbody>
</table>

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MNC04 Coal Training Package to be reviewed by 31 May 2007 - Version 2
Major Changes to the Training Package

Units of Competency

All Coal units of competency have been revised and developed in the required ANTA template. Although there have been adjustments to all units, the template changes did not change the intent of the original units. Appendix 3 outlines the changes that have been made to all units and where new units of competency have been developed or existing units adjusted. The amendments to existing units and the development of new units has been undertaken to meet identified skill and sectoral gaps within the Training Package. The industry recommendations which have been incorporated in all units of competency include:

- using plain English
- writing the Performance Criteria in active voice
- highlighting the linkages between the range statement and the performance criteria to more accurately reflect the contexts in which the unit of competency can be achieved
- ensuring linkages between the critical aspects of evidence, required knowledge and skills and the performance criteria
- ensuring there is a direct link between the key competencies and the performance criteria
- ensuring the requirements for literacy and numeracy are explicit.
Qualifications

Qualifications within the Coal Training Package have been structured to:

- provide greater flexibility to allow enterprises and individuals to select a combination of units of competency relevant to their training needs
- allow for greater choice of elective units, relevant to the job function, from other endorsed Training Packages
- provide the inclusion of Business Services Training Package units of competency as electives at Certificate II, Certificate III, Certificate IV, Diploma and Advanced Diploma level.

Where the number of units of competency to achieve a qualification has been reduced in the revised Coal Qualifications, the work required to achieve the qualifications has not changed. The reduction in the number of units is achieved by amalgamating units to better reflect work requirements. The details of the changes to the units of competency are in the section Mapping of Changes to Units of Competency.

New Qualifications

Seven new qualifications have been added to the Training Package. These include:

- Certificate II in Surface Coal Operations
- Certificate II in Coal Preparation
- Certificate III in Surface Coal Mining Operations
- Certificate III in Coal Preparation
- Certificate IV in Surface Coal Mining
- Advanced Diploma of Mine Mechanical Engineering
- Advanced Diploma of Mine Electrical Engineering

The original qualifications at Certificate II and Certificate III were structured to be used for operators in both surface and underground coal operations. The industry saw the need for separate qualifications specifically for underground and surface coal operations and coal preparation.

Changes to Qualification Titles

The changes to qualification titles are made to accommodate the inclusion of additional units and better reflect the industry needs.

The following table outlines changes in qualification titles and where new qualifications have been included.

<table>
<thead>
<tr>
<th>Qualifications in Coal Training Package MNC04</th>
<th>Qualifications in Coal Training Package MNC98</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>Title</td>
</tr>
<tr>
<td>MNC20107</td>
<td>Certificate II in Surface Coal Operations</td>
</tr>
<tr>
<td>MNC20204</td>
<td>Certificate II in Coal Preparation</td>
</tr>
<tr>
<td>MNC20307</td>
<td>Certificate II in Underground Coal Operations</td>
</tr>
<tr>
<td>MNC30104</td>
<td>Certificate III in Surface Coal Mining</td>
</tr>
<tr>
<td>Qualifications in Coal Training Package MNC04</td>
<td>Qualifications in Coal Training Package MNC98</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Code</td>
<td>Title</td>
</tr>
<tr>
<td>MNC30204</td>
<td>Certificate III in Coal Preparation</td>
</tr>
<tr>
<td>MNC30307</td>
<td>Certificate III in Underground Coal Operations</td>
</tr>
<tr>
<td>MNC40104</td>
<td>Certificate IV in Surface Coal Mining (Open Cut Examiner)</td>
</tr>
<tr>
<td>MNC40204</td>
<td>Certificate IV in Surface Coal Mining</td>
</tr>
<tr>
<td>MNC40304</td>
<td>Certificate IV in Underground Coal Mining</td>
</tr>
<tr>
<td>MNC50104</td>
<td>Diploma of Surface Coal Mining Management</td>
</tr>
<tr>
<td>MNC50204</td>
<td>Diploma of Underground Coal Mining Management</td>
</tr>
<tr>
<td>MNC50304</td>
<td>Diploma of Mine Mechanical Engineering</td>
</tr>
<tr>
<td>MNC50404</td>
<td>Diploma of Mine Electrical Engineering</td>
</tr>
<tr>
<td>MNC50404</td>
<td>Diploma of Mine Surveying</td>
</tr>
<tr>
<td>MNC60104</td>
<td>Advanced Diploma of Surface Coal Mining Management</td>
</tr>
<tr>
<td>MNC60204</td>
<td>Advanced Diploma of Underground Coal Mining Management</td>
</tr>
<tr>
<td>MNC60304</td>
<td>Advanced Diploma of Mine Mechanical Engineering</td>
</tr>
<tr>
<td>MNC60404</td>
<td>Advanced Diploma of Mine Electrical Engineering</td>
</tr>
</tbody>
</table>

**Assessment Guidelines**

The Assessment Guidelines have been adjusted to include the ANTA template and additional information relating to the context of assessment in the coal industry. Industry case studies which illustrate the operationalisation of assessment options are included to illustrate partnership arrangements with RTOs, RPL and options for gathering evidence in the assessment process.
Qualifications Framework

The Australian Qualifications Framework

What is the Australian Qualifications Framework?

A brief overview of the Australian Qualifications Framework (AQF) follows. For a full explanation of the AQF see the AQF Implementation Handbook, 3rd Edition 2002. You can download it from the Australian Qualifications- Framework Advisory Board (AQFAB) website (www.aqf.edu.au) or obtain a hard copy by contacting AQFAB on phone 03 9639 1606 or by emailing AQFAB on aqfab@curriculum.edu.au

The AQF provides a comprehensive, nationally consistent framework for all qualifications in post-compulsory education and training in Australia. In the vocational education and training (VET) sector it assists national consistency for all trainees, learners, employers and providers by enabling national recognition of qualifications and Statements of Attainment.

Training Package qualifications in the VET sector must comply with the titles and guidelines of the AQF. Endorsed Training Packages provide a unique title for each AQF qualification which must always be reproduced accurately.

Qualifications

Training Packages can incorporate the following six AQF qualifications.
- Certificate I in …
- Certificate II in …
- Certificate III in …
- Certificate IV in …
- Diploma of …
- Advanced Diploma of …

Graduate Certificates and Graduate Diplomas can also be awarded in the vocational education and training sector under certain conditions – see the AQF Implementation Handbook for details.

On completion of the requirements defined in the Training Package, a Registered Training Organisation (RTO) may issue a nationally recognised AQF qualification. Issuance of AQF qualifications must comply with the advice provided in the AQF Implementation Handbook and the Australian Quality Training Framework Standards for Registered Training Organisations, particularly Standard 10.

Statement of Attainment

Where an AQF qualification is partially achieved through the achievement of one or more endorsed units of competency, an RTO may issue a Statement of Attainment. Issuance of Statements of Attainment must comply with the advice provided in the AQF Implementation Handbook and the Australian Quality Training Framework Standards for Registered Training Organisations, particularly Standard 10.
Under the Standards for Registered Training Organisations, RTOs must recognise the achievement of competencies as recorded on a qualification or Statement of Attainment issued by other RTOs. Given this, recognised competencies can progressively build towards a full AQF qualification.

**AQF Guidelines and Learning Outcomes**

The AQF Implementation Handbook provides a comprehensive guideline for each AQF qualification. A summary of the learning outcome characteristics and their distinguishing features for each VET related AQF qualification is provided below.

### Certificate I

**Characteristics of Learning Outcomes**

Breadth, depth and complexity of knowledge and skills would prepare a person to perform a defined range of activities most of which may be routine and predictable.

Applications may include a variety of employment related skills including preparatory access and participation skills, broad-based induction skills and/or specific workplace skills. They may also include participation in a team or work group.

**Distinguishing Features of Learning Outcomes**

Do the competencies enable an individual with this qualification to:

- demonstrate knowledge by recall in a narrow range of areas;
- demonstrate basic practical skills, such as the use of relevant tools;
- perform a sequence of routine tasks given clear direction; and
- receive and pass on messages/information.

### Certificate II

**Characteristics of Learning Outcomes**

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of operations to be applied.

Performance of a prescribed range of functions involving known routines and procedures and some accountability for the quality of outcomes.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others as part of a group or team.

**Distinguishing Features of Learning Outcomes**

Do the competencies enable an individual with this qualification to:

- demonstrate basic operational knowledge in a moderate range of areas;
- apply a defined range of skills;
- apply known solutions to a limited range of predictable problems;
- perform a range of tasks where choice between a limited range of options is required;
assess and record information from varied sources; and

- take limited responsibility for own outputs in work and learning.

Certificate III

Characteristics of Learning Outcomes

Breadth, depth and complexity of knowledge and competencies would cover selecting, adapting and transferring skills and knowledge to new environments and providing technical advice and some leadership in resolution of specified problems. This would be applied across a range of roles in a variety of contexts with some complexity in the extent and choice of options available.

Performance of a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the section of equipment, services or contingency measures and within known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team co-ordination may be involved.

Distinguishing Features of Learning Outcomes

Do the competencies enable an individual with this qualification to:

- demonstrate some relevant theoretical knowledge;
- apply a range of well-developed skills;
- apply known solutions to a variety of predictable problems;
- perform processes that require a range of well-developed skills where some discretion and judgement is required;
- interpret available information, using discretion and judgement;
- take responsibility for own outputs in work and learning; and
- take limited responsibility for the output of others.
## Certificate IV

### Characteristics of Learning Outcomes

Breadth, depth and complexity of knowledge and competencies would cover a broad range of varied activities or application in a wider variety of contexts most of which are complex and non-routine. Leadership and guidance are involved when organising activities of self and others as well as contributing to technical solutions of a non-routine or contingency nature.

Performance of a broad range of skilled applications including the requirement to evaluate and analyse current practices, develop new criteria and procedures for performing current practices and provision of some leadership and guidance to others in the application and planning of the skills. Applications involve responsibility for, and limited organisation of, others.

### Distinguishing Features of Learning Outcomes

Do the competencies enable an individual with this qualification to:

- demonstrate understanding of a broad knowledge base incorporating some theoretical concepts;
- apply solutions to a defined range of unpredictable problems;
- identify and apply skill and knowledge areas to a wide variety of contexts, with depth in some areas;
- identify, analyse and evaluate information from a variety of sources;
- take responsibility for own outputs in relation to specified quality standards; and
- take limited responsibility for the quantity and quality of the output of others.

## Diploma

### Characteristics of Learning Outcomes

Breadth, depth and complexity covering planning and initiation of alternative approaches to skills or knowledge applications across a broad range of technical and/or management requirements, evaluation and co-ordination. The self-directed application of knowledge and skills, with substantial depth in some areas where judgement is required in planning and selecting appropriate equipment, services and techniques for self and others.

Applications involve participation in development of strategic initiatives as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams including teams concerned with planning and evaluation functions. Group or team co-ordination may be involved.

The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.

### Distinguishing Features of Learning Outcomes

Do the competencies or learning outcomes enable an individual with this qualification to:
- demonstrate understanding of a broad knowledge base incorporating theoretical concepts, with substantial depth in some areas;
- analyse and plan approaches to technical problems or management requirements;
- transfer and apply theoretical concepts and/or technical or creative skills to a range of situations;
- evaluate information, using it to forecast for planning or research purposes;
- take responsibility for own outputs in relation to broad quantity and quality parameters; and
- take some responsibility for the achievement of group outcomes.

**Advanced Diploma**

*Characteristics of Learning Outcomes*

Breadth, depth and complexity involving analysis, design, planning, execution and evaluation across a range of technical and/or management functions including development of new criteria or applications or knowledge or procedures. The application of a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts in relation to either varied or highly specific functions. Contribution to the development of a broad plan, budget or strategy is involved and accountability and responsibility for self and others in achieving the outcomes is involved.

Applications involve significant judgement in planning, design, technical or leadership/guidance functions related to products, services, operations or procedures. The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.

*Distinguishing Features of Learning Outcomes*

Do the competencies or learning outcomes enable an individual with this qualification to:
- demonstrate understanding of specialised knowledge with depth in some areas;
- analyse, diagnose, design and execute judgements across a broad range of technical or management functions;
- generate ideas through the analysis of information and concepts at an abstract level;
- demonstrate a command of wide-ranging, highly specialised technical, creative or conceptual skills;
- demonstrate accountability for personal outputs within broad parameters; and
- demonstrate accountability for personal and group outcomes within broad parameters.
Coal Qualification Titles

The following qualifications in the Coal Training Package (MNC04) replace the previous coal qualifications.

MNC20107  Certificate II in Surface Coal Operations
MNC20204  Certificate II in Coal Preparation
MNC20307  Certificate II in Underground Coal Operations
MNC30104  Certificate III in Surface Coal Mining Operations
MNC30204  Certificate III in Coal Preparation
MNC30307  Certificate III in Underground Coal Operations
MNC40104  Certificate IV in Surface Coal Mining (Open Cut Examiner)
MNC40204  Certificate IV in Surface Coal Mining
MNC40304  Certificate IV in Underground Coal Mining
MNC50104  Diploma of Surface Coal Mining Management
MNC50204  Diploma of Underground Coal Mining Management
MNC50304  Diploma of Mine Mechanical Engineering
MNC50404  Diploma of Mine Electrical Engineering
MNC50504  Diploma of Mine Surveying
MNC60104  Advanced Diploma of Surface Coal Mining Management
MNC60204  Advanced Diploma of Underground Coal Mining Management
MNC60304  Advanced Diploma of Mine Mechanical Engineering
MNC60404  Advanced Diploma of Mine Electrical Engineering

The packaging and alignment units of competency to form qualifications within the Coal Training Package (MNC04) are based on industry consultation. The industry consultation determined that qualifications in the coal industry should:

- reflect realities in terms of work organisation and job design
- reflect options to meet changing situations to avoid entrenching traditional approaches to work organisation and job design
- provide maximum flexibility to allow enterprises and individuals to select combinations of units of competency relevant to their training needs
- reflect any State/Territory licensing requirements
  - avoid leading to unnecessary training
  - recognise different entry points and development pathways
  - allow for articulation between qualifications
- create career path opportunities for personnel within the industry.
The packaging is based on industry consultation conducted during the review and validation phases for the development of the units of competency. The following strategies have been used in the packaging:

- the identification of mandatory units to meet occupational requirements
- flexibility in the choice of electives to meet the requirements of functional areas
- the incorporation of relevant units of competency from the Business Services Training Package (BSB01), Metalliferous Mining Training Package (MNM99), Electrotechnology Training Package (UTE99) and the Property Management and Development Training Package (PRD01) to facilitate portability of qualifications
- flexibility to allow elective units of competency, relevant to the job function, to be selected from within the Coal Training Package or other endorsed Training Packages.

Coal qualifications specific to underground, surface and coal preparation are identified at operator level to:

- reflect the specific requirements of the different mining contexts
- allow personnel working within these contexts to achieve a qualification
- provide clearer pathways for employees within the coal industry.

The packaging of the units of competency complements but does not infringe on the responsibilities and requirements of State and Territory based Regulatory Authorities. An individual seeking a qualification for a position covered by State and Territory regulatory requirements should check with the relevant Act and Regulatory Authority, the employer and the Registered Training Organisation providing the training and assessment, when selecting elective units of competency to complete the qualification.

**Coal Training Package Qualification Pathways**

The following sample qualifications pathways charts are provided for developers, to show the type of information that may be included. (They are simplified versions of existing Training Package qualifications pathways charts.) Developers must create a qualifications pathways chart in the industry preferred style. This could be based on the samples provided, or on any of the other of many Training Package qualifications pathways charts to be found on the DEST website at [www.dest.gov.au](http://www.dest.gov.au). Add contact details of the Industry Skills Council into the chart for enquiries about pathways and qualifications.

Employees in positions at operator level in the industry can access qualifications at Certificate II and Certificate III in underground coal operations, surface coal operations or coal preparation. In each specialisation context Certificate II is embedded in the Certificate III qualification. External entry and RPL with industry experience is available for these qualifications.

Of the three qualifications at Certificate IV level, one is specific for underground coal mining and one for surface coal mining. The third qualification Certificate IV in Surface Coal Mining (Open Cut Examiner) as been designed to support the statutory function of Open Cut Examiner in both Queensland and New South Wales surface coal mines. External entry and RPL with industry experience is available for these qualifications.
At Diploma and Advanced Diploma level there are qualifications specific for surface coal mining management and underground coal mining management. Additional to these, there are Diplomas in specific technical areas of mine mechanical engineering, mine electrical engineering and mine surveying and Advanced Diplomas in mine mechanical engineering, mine electrical engineering. These additional qualifications ensure that the specific technical skills are relevant to the coal mining context.

The Coal Training Package qualifications are achievable through a variety of pathways and training delivery and assessment options. Possible pathways include:

- work-based training and assessment
- a mixture of institution-based training and assessment and work-based training and assessment
- recognition of prior learning and current competency
- an accumulation of a variety of short course/training programs.

**NOTE:** School based VET programs are only appropriate when combined with work-based training and assessment. The occupational health and safety issues on coal mine sites and the need to assess most coal units of competency on a coal mine site mitigate against this pathway.

The following diagram illustrates the pathway options.

![Diagram 1: Pathways in Surface Coal Mining Qualifications](image-url)
Diagram 2: Pathways in Coal Preparation Qualifications

Diagram 3: Pathways in Underground Coal Mining Qualifications
Diagram 4: Pathways in Mine Electrical and Mechanical Engineering Qualifications

Diagram 5: Pathway for Mine Surveying

Transition Arrangements

Transition arrangements apply where existing coal qualifications are replaced by qualifications in the Coal Training Package (MNC04). Where possible currently enrolled students should be given the opportunity to transfer to the most recent qualification. When making a decision to transfer to a new qualifications, consider such issues as:

- the proportion of the qualification that has been completed by the learner
- the degree of alignment with the new qualification
- any potential advantage or disadvantage to learners.

RTOs should consult with their State Training Authority on whether their scope accommodates the qualifications in the Coal Training Package (MNC04).
### Use of Other Endorsed Standards in Coal Qualifications

The following units of competency have been imported into the Coal Training package qualifications. Care must be taken to ensure that all pre-requisites (specified within the unit of competency) are complied with for any unit of competency chosen as an elective from any other endorsed Training Package.

#### Units imported from the Metalliferous Mining Training Package (MNM05)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Packaged in</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNMULH204A</td>
<td>Conduct skip operations</td>
<td>• Certificate II in Underground Coal Operations</td>
</tr>
<tr>
<td>MNMULH205A</td>
<td>Operate automated winder</td>
<td>• Certificate III in Underground Coal Operations</td>
</tr>
<tr>
<td>MNMULH306A</td>
<td>Operate manual winder</td>
<td>• Certificate II in Underground Coal Operations</td>
</tr>
<tr>
<td>MNMULH311A</td>
<td>Conduct cage operations</td>
<td>• Certificate III in Underground Coal Operations</td>
</tr>
<tr>
<td>MNMULH312A</td>
<td>Operate winder for shaft sinking</td>
<td></td>
</tr>
<tr>
<td>MNMULH313A</td>
<td>Maintain winder equipment</td>
<td></td>
</tr>
<tr>
<td>MNMULH314A</td>
<td>Inspect and maintain shafts and structures</td>
<td></td>
</tr>
<tr>
<td>MNMULH315A</td>
<td>Monitor, inspect and service ropes and attachments</td>
<td></td>
</tr>
</tbody>
</table>

Packaged in:
- Certificate II in Underground Coal Operations
- Certificate III in Underground Coal Operations

#### Units imported from the Business Services Training Package (BSB01)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Packaged in</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSBCM215A</td>
<td>Participate in environmental work practices</td>
<td>• Certificate II in Surface Coal Operations</td>
</tr>
<tr>
<td>BSBCM313A</td>
<td>Maintain environmental procedures</td>
<td>• Certificate II in Coal Preparation</td>
</tr>
<tr>
<td>BSBCM402A</td>
<td>Support leadership in the workplace</td>
<td>• Certificate II in Underground Coal Operations</td>
</tr>
<tr>
<td>BSBCM404A</td>
<td>Develop work priorities</td>
<td></td>
</tr>
<tr>
<td>BSBCM410A</td>
<td>Coordinate implementation of customer service strategies</td>
<td></td>
</tr>
<tr>
<td>BSBCM412A</td>
<td>Promote innovation and change</td>
<td></td>
</tr>
<tr>
<td>BSBCM402A</td>
<td>Show leadership in the workplace</td>
<td></td>
</tr>
<tr>
<td>BSBCM403A</td>
<td>Manage effective workplace relationships</td>
<td></td>
</tr>
<tr>
<td>BSBCM501A</td>
<td>Manage personal work priorities and professional development</td>
<td></td>
</tr>
<tr>
<td>BSBCM502A</td>
<td>Provide leadership in the workplace</td>
<td></td>
</tr>
<tr>
<td>BSBCM503A</td>
<td>Establish effective workplace relationships</td>
<td></td>
</tr>
<tr>
<td>BSBCM504A</td>
<td>Facilitate work teams</td>
<td></td>
</tr>
<tr>
<td>BSBCM505A</td>
<td>Manage operational plan</td>
<td></td>
</tr>
</tbody>
</table>

Packaged in:
- Certificate IV in Surface Coal Mining (Open Cut Examiner)
- Certificate IV in Surface Coal Mining
- Certificate IV in Underground Coal Mining
- Diploma of Surface Coal Mining Management
- Diploma of Underground Coal
### Units in the BSBFLM506A Unit

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Qualifications Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSBFLM506A</td>
<td>Manage workplace relationships</td>
<td>Mining Management</td>
</tr>
<tr>
<td>BSBFLM507A</td>
<td>Manage quality customer service</td>
<td>• Diploma of Mine Mechanical Engineering</td>
</tr>
<tr>
<td>BSBFLM509A</td>
<td>Promote continuous improvement</td>
<td>• Diploma of Mine Electrical Engineering</td>
</tr>
<tr>
<td>BSBFLM510A</td>
<td>Facilitate and capitalise on change and innovation</td>
<td></td>
</tr>
<tr>
<td>BSBFLM511A</td>
<td>Develop a workplace learning environment</td>
<td></td>
</tr>
<tr>
<td>BSBSBM402A</td>
<td>Undertake financial planning</td>
<td></td>
</tr>
<tr>
<td>BSBSBM406A</td>
<td>Manage finances</td>
<td></td>
</tr>
<tr>
<td>BSBMG502A</td>
<td>Manage people performance</td>
<td>Packaged in:</td>
</tr>
<tr>
<td>BSBMG504A</td>
<td>Manage budgets and financial plans</td>
<td>• Diploma of Mine Mechanical Engineering</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Diploma of Mine Electrical Engineering</td>
</tr>
<tr>
<td>BSBSBM503A</td>
<td>Prepare budgets and financial plans</td>
<td>Packaged in:</td>
</tr>
<tr>
<td>BSBSBM504A</td>
<td>Manage budgets and financial plans</td>
<td>• Advanced Diploma of Surface Coal Mining Management</td>
</tr>
<tr>
<td>BSBSBM601A</td>
<td>Contribute to strategic direction</td>
<td>• Advanced Diploma of Underground Coal Mining Management</td>
</tr>
<tr>
<td>BSBSBM602A</td>
<td>Contribute to the development and implementation of strategic plans</td>
<td>• Advanced Diploma of Mine Mechanical Engineering</td>
</tr>
<tr>
<td>BSBSBM603A</td>
<td>Review and develop business plans</td>
<td>• Advanced Diploma of Mine Electrical Engineering</td>
</tr>
<tr>
<td>BSBSBM604A</td>
<td>Manage business operations</td>
<td></td>
</tr>
<tr>
<td>BSBSBM605A</td>
<td>Provide leadership across the organisation</td>
<td></td>
</tr>
<tr>
<td>BSBSBM607A</td>
<td>Manage knowledge and information</td>
<td></td>
</tr>
<tr>
<td>BSBSBM608A</td>
<td>Manage innovation and continuous improvement</td>
<td></td>
</tr>
<tr>
<td>BSBSBM610A</td>
<td>Manage environmental management systems</td>
<td></td>
</tr>
</tbody>
</table>

### Units imported from the Property Development and Management Training Package (PRD01)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Packaged in:</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRDSIS03A</td>
<td>Implement a project plan</td>
<td>• Diploma of Mine Surveying</td>
</tr>
<tr>
<td>PRDSIS04A</td>
<td>Determine spatial data requirements to meet the deliverables</td>
<td></td>
</tr>
<tr>
<td>PRDSIS05A</td>
<td>Determine suitable sources of information for the creation of new spatial data sets</td>
<td></td>
</tr>
<tr>
<td>PRDSIS06A</td>
<td>Plan data collection and validation</td>
<td></td>
</tr>
<tr>
<td>PRDSIS07A</td>
<td>Capture new data</td>
<td></td>
</tr>
<tr>
<td>PRDSIS08A</td>
<td>Obtain and validate existing data</td>
<td></td>
</tr>
<tr>
<td>PRDSIS13A</td>
<td>Design a spatial data storage system</td>
<td></td>
</tr>
<tr>
<td>PRDSIS14A</td>
<td>Integrate spatial data sets</td>
<td></td>
</tr>
<tr>
<td>PRDSIS15A</td>
<td>Maintain spatial data</td>
<td></td>
</tr>
<tr>
<td>PRDSIS16A</td>
<td>Store and retrieve spatial data</td>
<td></td>
</tr>
<tr>
<td>PRDSIS18A</td>
<td>Produce project deliverables</td>
<td></td>
</tr>
<tr>
<td>PRDSIS19A</td>
<td>Collate and interpret data</td>
<td></td>
</tr>
<tr>
<td>PRDSIS20A</td>
<td>Design project deliverables</td>
<td></td>
</tr>
<tr>
<td>PRDSIS22A</td>
<td>Control and monitor the spatial components of the project</td>
<td></td>
</tr>
<tr>
<td>PRDSIS24A</td>
<td>Maintain financial records</td>
<td></td>
</tr>
<tr>
<td>PRDSIS25A</td>
<td>Lead and supervise teams</td>
<td></td>
</tr>
<tr>
<td>PRDSIS27A</td>
<td>Maintain client relations</td>
<td></td>
</tr>
<tr>
<td>PRSIR39A</td>
<td>Manage occupational health and safety in the workplace</td>
<td></td>
</tr>
<tr>
<td>PRSIR31A</td>
<td>Undertake process improvement to reduce costs and improve quality service</td>
<td></td>
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<tr>
<td>----------</td>
<td>--------------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>

### Units Imported from the Electrotechnology Training Package (UTE99 V3.03)

| UTENES010A | Report on the integrity of explosion-protected equipment in hazardous areas |
| UTENES012 (A to Z qualifier) A | Attend to breakdowns in hazardous areas |
| UTENES107 (A to Z qualifier) A | Install explosion-protected equipment and wiring systems |
| UTENES214 (A to Z qualifier) A | Maintain equipment in hazardous areas |
| UTENES215 (A to Z qualifier) A | Overhaul and repair explosion-protected equipment |
| UTENES303 (A to Z qualifier) A | Undertake commissioning of apparatus and systems’ circuits |
| UTENES304 (A to Z qualifier) A | Undertake commissioning of advanced systems and apparatus |
| UTENES404 (A to Z qualifier) A | Assess electrical/electronic apparatus |
| UTENES406 (A to Z qualifier) A | Develop complex testing and evaluation procedures |
| UTENES407 (A to Z qualifier) A | Assess explosion-protected equipment for conformance with standards |
| UTENES408 (A to Z qualifier) A | Test installations in hazardous areas |
| UTENES409 (A to Z qualifier) A | Inspect visually existing hazardous area installations |
| UTENES410 (A to Z qualifier) A | Inspect in detail hazardous area installations |
| UTENES503 (A to Z qualifier) A | Diagnose and rectify faults in apparatus and systems’ circuits |
| UTENES504 (A to Z qualifier) A | Diagnose and rectify faults in advanced systems and apparatus |
| UTENES602 (A to Z qualifier) A | Develop commissioning programs for apparatus and circuits |
| UTENES603 (A to Z qualifier) A | Develop maintenance programs for apparatus and circuits |
| UTENES604 (A to Z qualifier) A | Coordinate and manage commissioning processes |
| UTENES605 (A to Z qualifier) A | Coordinate and manage routine maintenance |
| UTENES606 (A to Z qualifier) A | Coordinate and manage installation projects (Electrical) |
| UTENES609 (A to Z qualifier) A | Develop and manage maintenance programs for hazardous area electrical equipment |
| UTENES701 (A to Z qualifier) A | Redesign and develop modifications to apparatus and systems’ circuits |
| UTENES705 (A to Z qualifier) A | Design and develop modifications to explosion-protected equipment |
| UTENES707 (A to Z qualifier) A | Design electrical installations in hazardous areas |
| UTENES708 (A to Z qualifier) A | Design explosion-protected electrical systems |

Packaged in the:
- Diploma of Mine Electrical Engineering
- Advanced Diploma of Mine Electrical Engineering
The qualifications also provide the option to select a small number of elective units, relevant to the job function, from the Coal Training Package or from other endorsed Training Packages. Again care must be taken to ensure that all pre-requisites (specified within the unit of competency) are complied with for any unit of competency chosen as an elective from any other endorsed Training Package.
Traineeships and Apprenticeships

The following qualifications are identified as New Apprenticeships:

- MNC20107 Certificate II in Surface Coal Operations
- MNC20204 Certificate II in Coal Preparations
- MNC20307 Certificate II in Underground Coal Operations
- MNC30104 Certificate III in Surface Coal Mining Operations
- MNC30204 Certificate III in Coal preparation
- MNC30307 Certificate III in Underground Coal Operations
- MNC40104 Certificate IV in Surface Coal Mining (Open Cut Examiner)
- MNC40204 Certificate IV in Surface Coal Mining
- MNC40304 Certificate IV in Underground Coal Mining

Qualification Customisation within and outside the Training Package

The purpose of customisation of qualifications is to provide training that is tailored to the needs of specific workplaces. The opportunity for customisation of coal qualifications has been provided through mandatory and electives units of competency in each qualification. The mandatory units provide national consistency in core knowledge and skills. The elective units of competency provide the flexibility required by different enterprises and/or training situations. Each qualification has a wide range of electives that allow a choice to meet specific work requirements.

Most qualifications provide the option to select a small number of elective units, relevant to the job function, from elsewhere in the Coal Training Package or from other endorsed Training Packages. This allows for the situation where a candidate's range of work functions includes the mandatory and core functions in the coal industry but also includes specialist functions performed in other industries, but not included in this Training Package. In each qualification the requirements for the selection of units from other endorsed Training Packages is specified.

Any customisation of coal industry qualifications must ensure quality outcomes and preserve the integrity of the qualification. To do this the following principles should be followed:

- Mandatory units of competency must not be replaced or substituted.
- Units of competency selected from other endorsed Training Packages must be relevant to the job function.
- AQF requirements for the qualification must be satisfied.
- The selection of units of competency must complete the entire requirements for mandatory and elective units as specified in the requirements for the qualification.
- When customised units of competency have been included, the RTO or enterprise must ensure that any qualification generated must, as a minimum, be comparable to a qualification achieved against the industry units of competency.
- The elective units selected must not restrict the candidate's access to further education or employment opportunities within the industry.
- Training modules may not be substituted for endorsed units of competency.
There is no restriction on the use by other industries and enterprises of individual units of competency, either mandatory or elective, in the endorsed standards covered by this Training Package.

Employability Skills

Employability Skills replacing Key Competency information from 2006

In May 2005, the approach to incorporate Employability Skills within Training Package qualifications and units of competency was endorsed. As a result, from 2006 Employability Skills will progressively replace Key Competency information in Training Packages.

Background to Employability Skills

Employability Skills are also sometimes referred to as generic skills, capabilities or Key Competencies. The Employability Skills discussed here build on the Mayer Committee’s Key Competencies, which were developed in 1992 and attempted to describe generic competencies for effective participation in work.

The Business Council of Australia (BCA) and the Australian Chamber of Commerce and Industry (ACCI), produced the Employability Skills for the Future report in 2002 in consultation with other peak employer bodies and with funding provided by the Department of Education, Science and Training (DEST) and the Australian National Training Authority (ANTA). Officially released by Dr Nelson (Minister for Education, Science and Training) on 23 May 2002, copies of the report are available from the DEST website at:


The report indicated that business and industry now require a broader range of skills than the Mayer Key Competencies Framework and featured an Employability Skills Framework identifying eight Employability Skills:

- communication
- teamwork
- problem solving
- initiative and enterprise
- planning and organising
- self-management
- learning
- technology.

The report demonstrated how Employability Skills can be further described for particular occupational and industry contexts by sets of facets. The facets listed in the report are the aspects of the Employability Skills that the sample of employers surveyed identified as being important work skills. These facets were seen by employers as being dependent both in their nature and priority on an enterprise’s business activity.

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1 Personal attributes that contribute to employability were also identified in the report but are not part of the Employability Skills Framework.
## Employability Skills Framework

The following table contains the Employability Skills facets identified in the report *Employability Skills for the Future*.

<table>
<thead>
<tr>
<th>Skill</th>
<th>Facets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication</strong> that</td>
<td>• listening and understanding</td>
</tr>
<tr>
<td>contributes to productive</td>
<td>• speaking clearly and directly</td>
</tr>
<tr>
<td>and harmonious relations</td>
<td>• writing to the needs of the audience</td>
</tr>
<tr>
<td>across employees and customers</td>
<td>• negotiating responsively</td>
</tr>
<tr>
<td></td>
<td>• reading independently</td>
</tr>
<tr>
<td></td>
<td>• empathising</td>
</tr>
<tr>
<td></td>
<td>• using numeracy effectively</td>
</tr>
<tr>
<td></td>
<td>• understanding the needs of internal and external customers</td>
</tr>
<tr>
<td></td>
<td>• persuading effectively</td>
</tr>
<tr>
<td></td>
<td>• establishing and using networks</td>
</tr>
<tr>
<td></td>
<td>• being assertive</td>
</tr>
<tr>
<td></td>
<td>• sharing information</td>
</tr>
<tr>
<td></td>
<td>• speaking and writing in languages other than English</td>
</tr>
<tr>
<td><strong>Teamwork</strong> that</td>
<td>• working across different ages irrespective of gender, race, religion</td>
</tr>
<tr>
<td>contributes to productive</td>
<td>• working as an individual and as a member of a team</td>
</tr>
<tr>
<td>working relationships</td>
<td>• knowing how to define a role as part of the team</td>
</tr>
<tr>
<td>and outcomes</td>
<td>• applying teamwork to a range of situations e.g. futures planning and</td>
</tr>
<tr>
<td></td>
<td>• crisis problem solving</td>
</tr>
<tr>
<td></td>
<td>• identifying the strengths of team members</td>
</tr>
<tr>
<td></td>
<td>• coaching and mentoring skills, including giving feedback</td>
</tr>
<tr>
<td><strong>Problem solving</strong> that</td>
<td>• developing creative, innovative and practical solutions</td>
</tr>
<tr>
<td>contributes to productive</td>
<td>• showing independence and initiative in identifying and solving</td>
</tr>
<tr>
<td>outcomes</td>
<td>• problems</td>
</tr>
<tr>
<td></td>
<td>• solving problems in teams</td>
</tr>
<tr>
<td></td>
<td>• applying a range of strategies to problem solving</td>
</tr>
<tr>
<td></td>
<td>• using mathematics, including budgeting and financial management to</td>
</tr>
<tr>
<td></td>
<td>• solve problems</td>
</tr>
<tr>
<td></td>
<td>• applying problem-solving strategies across a range of areas</td>
</tr>
<tr>
<td></td>
<td>• testing assumptions, taking into account the context of data and</td>
</tr>
<tr>
<td></td>
<td>• circumstances</td>
</tr>
<tr>
<td></td>
<td>• resolving customer concerns in relation to complex project issues</td>
</tr>
<tr>
<td><strong>Initiative and enterprise</strong></td>
<td>• adapting to new situations</td>
</tr>
<tr>
<td>that contribute to innovative</td>
<td>• developing a strategic, creative and long-term vision</td>
</tr>
<tr>
<td>outcomes</td>
<td>• being creative</td>
</tr>
<tr>
<td></td>
<td>• identifying opportunities not obvious to others</td>
</tr>
<tr>
<td></td>
<td>• translating ideas into action</td>
</tr>
<tr>
<td></td>
<td>• generating a range of options</td>
</tr>
<tr>
<td></td>
<td>• initiating innovative solutions</td>
</tr>
<tr>
<td>Skill</td>
<td>Facets</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| **Planning and organising** that contribute to long and short-term strategic planning | - managing time and priorities – setting time lines, coordinating tasks for self and with others  
- being resourceful  
- taking initiative and making decisions  
- adapting resource allocations to cope with contingencies  
- establishing clear project goals and deliverables  
- allocating people and other resources to tasks  
- planning the use of resources, including time management  
- participating in continuous improvement and planning processes  
- developing a vision and a proactive plan to accompany it  
- predicting – weighing up risk, evaluating alternatives and applying evaluation criteria  
- collecting, analysing and organising information  
- understanding basic business systems and their relationships |
| **Self-management** that contributes to employee satisfaction and growth | - having a personal vision and goals  
- evaluating and monitoring own performance  
- having knowledge and confidence in own ideas and visions  
- articulating own ideas and visions  
- taking responsibility |
| **Learning** that contributes to ongoing improvement and expansion in employee and company operations and outcomes | - managing own learning  
- contributing to the learning community at the workplace  
- using a range of mediums to learn – mentoring, peer support and networking, IT and courses  
- applying learning to technical issues (e.g. learning about products) and people issues (e.g. interpersonal and cultural aspects of work)  
- having enthusiasm for ongoing learning  
- being willing to learn in any setting – on and off the job  
- being open to new ideas and techniques  
- being prepared to invest time and effort in learning new skills  
- acknowledging the need to learn in order to accommodate change |
| **Technology** that contributes to the effective carrying out of tasks | - having a range of basic IT skills  
- applying IT as a management tool  
- using IT to organise data  
- being willing to learn new IT skills  
- having the OHS knowledge to apply technology  
- having the appropriate physical capacity |
Employability Skills Summary

An Employability Skills Summary exists for each qualification. Summaries provide a lens through which to view Employability Skills at the qualification level and capture the key aspects or facets of the Employability Skills that are important to the job roles covered by the qualification. Summaries are designed to assist trainers and assessors to identify and include important industry application of Employability Skills in learning and assessment strategies.

The following is important information for trainers and assessors about Employability Skills Summaries.

- Employability Skills Summaries provide examples of how each skill is applicable to the job roles covered by the qualification.
- Employability Skills Summaries contain general information about industry context which is further explained as measurable outcomes of performance in the units of competency in each qualification.
- The detail in each Employability Skills Summary will vary depending on the range of job roles covered by the qualification in question.
- Employability Skills Summaries are not exhaustive lists of qualification requirements or checklists of performance (which are separate assessment tools that should be designed by trainers and assessors after analysis at the unit level).
- Employability Skills Summaries contain information that may also assist in building learners’ understanding of industry and workplace expectations.
Packaging Rules for MNC04 Qualifications

MNC20107 Certificate II in Surface Coal Operations

Characteristics of the Qualification

Descriptor: The Certificate II in Surface Coal Operations encompasses the role of employees such as operators in an open cut coal mine who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.

Requirements: Successful completion of nine (9) units of competency made up of:

- Four (4) mandatory units of competency
- Five (5) elective units of competency of which:
  - a minimum of two (2) units are drawn from the specified Open Cut Coal Training Package units listed
  - A maximum of three (3) units listed, which may include a maximum of two (2) units imported from elsewhere in the Coal Training Package or other endorsed Training Packages, relevant to the job function
<table>
<thead>
<tr>
<th>Mandatory Units</th>
<th>Completion of 9 units of competency</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 units to be completed</td>
<td></td>
</tr>
<tr>
<td>MNCC1001B</td>
<td>Work safely</td>
</tr>
<tr>
<td>MNCC1005A</td>
<td>Comply with site work systems / procedures</td>
</tr>
<tr>
<td>MNCC1006B</td>
<td>Conduct local risk assessment</td>
</tr>
<tr>
<td>MNCC1007A</td>
<td>Communicate in the workplace</td>
</tr>
<tr>
<td></td>
<td><strong>Open Cut</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Elective Units</strong> 5 units to be completed</td>
</tr>
<tr>
<td></td>
<td>a minimum of 2 units from the Coal Training Package Open Cut units listed</td>
</tr>
<tr>
<td></td>
<td>A maximum of three (3) units listed, which may include a maximum of two (2) units imported from elsewhere in the Coal Training Package or other endorsed Training Packages, relevant to the job function</td>
</tr>
<tr>
<td></td>
<td><strong>General Units</strong></td>
</tr>
<tr>
<td></td>
<td>BSBCM215A</td>
</tr>
<tr>
<td></td>
<td>MNCG1004A</td>
</tr>
<tr>
<td></td>
<td>MNCG1005A</td>
</tr>
<tr>
<td></td>
<td>MNCG1010A</td>
</tr>
<tr>
<td></td>
<td>MNCG1011A</td>
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<tr>
<td></td>
<td>MNCG1012A</td>
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<tr>
<td></td>
<td>MNCG1013A</td>
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<tr>
<td></td>
<td>MNCG1025A</td>
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<td></td>
<td>MNCG1026A</td>
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<tr>
<td></td>
<td>MNCG1031B</td>
</tr>
<tr>
<td></td>
<td>MNCG1032B</td>
</tr>
<tr>
<td></td>
<td>MNCG1033A</td>
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<tr>
<td></td>
<td>MNCG1035A</td>
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<td></td>
<td>MNCG1036A</td>
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<td></td>
<td>MNCG1037A</td>
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<tr>
<td></td>
<td>MNCG1038A</td>
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<tr>
<td></td>
<td>MNCG1040A</td>
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<tr>
<td></td>
<td>MNCG1041A</td>
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<tr>
<td></td>
<td>MNCG1042A</td>
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<td></td>
<td>MNCG1043A</td>
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<td>MNCG1044A</td>
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<tr>
<td></td>
<td>MNCG1046A</td>
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<td>MNCG1048A</td>
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<td></td>
<td>MNCG1049A</td>
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<td></td>
<td>MNCG1050A</td>
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<td>MNCG1055A</td>
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<td></td>
<td>MNCG1060A</td>
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<tr>
<td></td>
<td>MNCG1061A</td>
</tr>
<tr>
<td></td>
<td>MNCG1062A</td>
</tr>
<tr>
<td></td>
<td>MNCG1063A</td>
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<tr>
<td></td>
<td>MNCG1064A</td>
</tr>
<tr>
<td></td>
<td>MNCG1068A</td>
</tr>
<tr>
<td></td>
<td>MNCG1070A</td>
</tr>
<tr>
<td></td>
<td><strong>Coal Preparation and Treatment</strong></td>
</tr>
<tr>
<td></td>
<td>MNCP1001A</td>
</tr>
<tr>
<td></td>
<td>MNCP1002A</td>
</tr>
<tr>
<td></td>
<td>MNCP1004A</td>
</tr>
<tr>
<td></td>
<td>MNCP1005A</td>
</tr>
<tr>
<td></td>
<td>MNCP1006A</td>
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<tr>
<td></td>
<td>MNCP1007A</td>
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<tr>
<td></td>
<td>MNCP1008A</td>
</tr>
<tr>
<td></td>
<td>MNCP1009A</td>
</tr>
</tbody>
</table>
MNC20204 Certificate II in Coal Preparation

Characteristics of the Qualification

Descriptor: The Certificate II in Coal preparation encompasses the role of employees such as operators working in coal preparation plants who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.

Requirements: Successful completion of nine (9) units of competency made up of:

- Four (4) mandatory units of competency
- Five (5) elective units of competency of which
  - a minimum of three (3) units are drawn from the specified Coal Training Package Coal Preparation units listed
  - a maximum of two (2) units, relevant to the job function, drawn from the Coal Training Package or other endorsed Training Packages.
## MNC20204 Certificate II in Coal Preparation

Completion of 9 units of competency

<table>
<thead>
<tr>
<th>Mandatory Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 units to be completed</td>
</tr>
</tbody>
</table>

- MNCC1001B Work safely
- MNCC1005A Comply with site work systems / procedures
- MNCC1006B Conduct local risk assessment
- MNCC1007A Communicate in the workplace

<table>
<thead>
<tr>
<th>Elective Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 units to be completed</td>
</tr>
</tbody>
</table>

- a minimum of 3 units from the Coal Training Package units listed
- a maximum of 2 units, relevant to the job function, drawn from the Coal Training Package or other endorsed Training Packages

<table>
<thead>
<tr>
<th>Coal Preparation and Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCP1001A Handle raw coal</td>
</tr>
<tr>
<td>MNCP1002A Monitor coal preparation plant operations</td>
</tr>
<tr>
<td>MNCP1004A Treat and dispose of rejects and tailings</td>
</tr>
<tr>
<td>MNCP1005A Conduct sampling operations</td>
</tr>
<tr>
<td>MNCP1006A Conduct stockpile dozer operations</td>
</tr>
<tr>
<td>MNCP1007A Conduct stockpile reclaimer operations</td>
</tr>
<tr>
<td>MNCP1008A Conduct rail dispatch operations</td>
</tr>
<tr>
<td>MNCP1009A Perform plant operational maintenance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSBCM215A Participate in environmental work practices</td>
</tr>
<tr>
<td>MNCG1004A Respond to local emergencies and incidents</td>
</tr>
<tr>
<td>MNCG1010A Assess and implement life support systems and stabilise casualties</td>
</tr>
<tr>
<td>MNCG1011A Extricate and transport people involved in incidents</td>
</tr>
<tr>
<td>MNCG1013A Apply initial response first aid</td>
</tr>
<tr>
<td>MNCG1025A Access, update and retrieve simple computerised information</td>
</tr>
<tr>
<td>MNCG1026A Operate a computer to produce documents</td>
</tr>
<tr>
<td>MNCG1033A Conduct lifting operations</td>
</tr>
<tr>
<td>MNCG1035A Operate a computer to produce documents</td>
</tr>
<tr>
<td>MNCG1036A Provide support to electrical tradesperson</td>
</tr>
<tr>
<td>MNCG1037A Service mine plant and equipment</td>
</tr>
<tr>
<td>MNCG1038A Perform basic cutting and welding</td>
</tr>
<tr>
<td>MNCG1043A Conduct dogging operations</td>
</tr>
<tr>
<td>MNCG1044A Conduct basic rigging operations</td>
</tr>
<tr>
<td>MNCG1046A Conduct basic scaffolding operations</td>
</tr>
<tr>
<td>MNCG1060A Operate support equipment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Open Cut</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCO1013A Conduct front end loader operations</td>
</tr>
<tr>
<td>MNCO1014A Conduct haul truck operations</td>
</tr>
<tr>
<td>MNCO1015A Conduct bulk water truck operations</td>
</tr>
<tr>
<td>MNCO1016A Conduct grader operations</td>
</tr>
<tr>
<td>MNCO1036A Conduct mobile crushing and screening plant operations</td>
</tr>
</tbody>
</table>
MNC20307 Certificate II in Underground Coal Operations

Characteristics of the Qualification

Descriptor:  The Certificate II in Underground Coal Operations encompasses the role of employees such as operators in an underground coal mine who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.

Requirements:  Successful completion of twelve (12) units of competency made up of:

- Four (4) mandatory units of competency
- Eight (8) elective units of competency of which
  - a minimum of six (6) units are drawn from the specified Coal Training Package Underground units listed
  - a maximum of two (2) units, relevant to the job function, are drawn from the Coal Training Package or other endorsed Training Packages.
## MNC20307 Certificate II in Underground Coal Operations

**Completion of 12 units of competency**

### Mandatory Units

4 units to be completed

- MNCC1001B Work safely
- MNCC1005A Comply with site work systems / procedures
- MNCC1006B Conduct local risk assessment
- MNCC1007A Communicate in the workplace

### Elective Units

8 units to be completed

- **Underground**
  - a minimum of 6 units from the Coal Training Package Underground units listed
  - a maximum of 2 units, relevant to the job function, drawn from the Coal Training package or other endorsed Training Packages

<table>
<thead>
<tr>
<th>Unit Code</th>
<th>Unit Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCC1001B</td>
<td>Work safely</td>
</tr>
<tr>
<td>MNCC1005A</td>
<td>Comply with site work systems / procedures</td>
</tr>
<tr>
<td>MNCC1006B</td>
<td>Conduct local risk assessment</td>
</tr>
<tr>
<td>MNCC1007A</td>
<td>Communicate in the workplace</td>
</tr>
<tr>
<td>MNCC1008A</td>
<td>Comply with mine safety requirements</td>
</tr>
<tr>
<td>MNCC1009A</td>
<td>Comply with health and safety regulations</td>
</tr>
<tr>
<td>MNCC1010A</td>
<td>Conduct underground lifting operations</td>
</tr>
<tr>
<td>MNCC1011A</td>
<td>Operate power tram</td>
</tr>
<tr>
<td>MNCC1012A</td>
<td>Conduct rail vehicle operations</td>
</tr>
<tr>
<td>MNCC1013A</td>
<td>Conduct tracked vehicle/plant operations</td>
</tr>
<tr>
<td>MNCC1014A</td>
<td>Conduct wheeled vehicle operations (non-articulated)</td>
</tr>
<tr>
<td>MNCC1015A</td>
<td>Conduct wheeled grader operations</td>
</tr>
<tr>
<td>MNCC1016A</td>
<td>Conduct wheeled vehicle operations (articulated)</td>
</tr>
<tr>
<td>MNCC1017A</td>
<td>Escape from hazardous situation unaided</td>
</tr>
<tr>
<td>MNCC1018A</td>
<td>Install, maintain and recover gas drainage system</td>
</tr>
<tr>
<td>MNCC1019A</td>
<td>Install, maintain and recover electrical services</td>
</tr>
<tr>
<td>MNCC1020A</td>
<td>Install, maintain and recover water and air systems</td>
</tr>
<tr>
<td>MNCC1021A</td>
<td>Support shotfiring operations</td>
</tr>
<tr>
<td>MNCC1022A</td>
<td>Conduct rotational drilling</td>
</tr>
<tr>
<td>MNCC1023A</td>
<td>Conduct basic strata control operations</td>
</tr>
<tr>
<td>MNCC1024A</td>
<td>Conduct roadway maintenance</td>
</tr>
<tr>
<td>MNCC1025A</td>
<td>Conduct stone dusting operations</td>
</tr>
<tr>
<td>MNCC1026A</td>
<td>Dewater roadways and work areas</td>
</tr>
<tr>
<td>MNCC1027A</td>
<td>Lay and recover rail</td>
</tr>
<tr>
<td>MNCC1028A</td>
<td>Install and maintain explosion barriers</td>
</tr>
<tr>
<td>MNCC1029A</td>
<td>Construct and maintain basic ventilation devices</td>
</tr>
<tr>
<td>MNCC1030A</td>
<td>Conduct feeder breaker operations</td>
</tr>
<tr>
<td>MNCC1031A</td>
<td>Conduct face ventilation operations</td>
</tr>
<tr>
<td>MNCC1032A</td>
<td>Operate longwall ancillary equipment</td>
</tr>
<tr>
<td>MNCC1033A</td>
<td>Maintain lamp cabin operations</td>
</tr>
<tr>
<td>MNCC1034A</td>
<td>Apply spontaneous combustion management measures</td>
</tr>
<tr>
<td>MNCC1035A</td>
<td>Participate in environmental work practices</td>
</tr>
<tr>
<td>MNCC1036A</td>
<td>Respond to local emergencies and incidents</td>
</tr>
<tr>
<td>MNCC1037A</td>
<td>Maintain bathroom hygiene</td>
</tr>
<tr>
<td>MNCC1038A</td>
<td>Apply initial response first aid</td>
</tr>
<tr>
<td>MNCC1039A</td>
<td>Access update and retrieve simple computerised information</td>
</tr>
<tr>
<td>MNCC1040A</td>
<td>Operate computer to produce documents</td>
</tr>
<tr>
<td>MNCC1041A</td>
<td>Transform information through a computer</td>
</tr>
<tr>
<td>MNCC1042A</td>
<td>Conduct purchasing</td>
</tr>
<tr>
<td>MNCC1043A</td>
<td>Conduct non-slewing crane operations</td>
</tr>
<tr>
<td>MNCC1044A</td>
<td>Conduct dogging operations</td>
</tr>
<tr>
<td>MNCC1045A</td>
<td>Conduct basic rigging operations</td>
</tr>
<tr>
<td>MNCC1046A</td>
<td>Conduct intermediate rigging operations</td>
</tr>
<tr>
<td>MNCC1047A</td>
<td>Conduct basic scaffolding operations</td>
</tr>
<tr>
<td>MNCC1048A</td>
<td>Conduct intermediate scaffolding operations</td>
</tr>
<tr>
<td>MNCC1049A</td>
<td>Conduct forklift operations</td>
</tr>
<tr>
<td>MNCC1050A</td>
<td>Operate elevating work platform</td>
</tr>
<tr>
<td>MNCC1051A</td>
<td>Operate vehicle loading crane</td>
</tr>
<tr>
<td>MNCC1052A</td>
<td>Extend, retract and maintain conveyor componentry</td>
</tr>
<tr>
<td>MNCC1053A</td>
<td>Operate support equipment</td>
</tr>
<tr>
<td>MNCC1054A</td>
<td>Operate light vehicle</td>
</tr>
<tr>
<td>MNCC1055A</td>
<td>Operate medium vehicle</td>
</tr>
<tr>
<td>MNCC1056A</td>
<td>Test operational functions of mine vehicles and equipment</td>
</tr>
<tr>
<td>MNCC1057A</td>
<td>Provide deck support for conveyor-car high wall mining operations</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>MNMULH204A</td>
<td>Conduct skip operations</td>
</tr>
<tr>
<td>MNMULH205A</td>
<td>Operate automated winder</td>
</tr>
<tr>
<td>MNMULH306A</td>
<td>Operate manual winder</td>
</tr>
<tr>
<td>MNMULH311A</td>
<td>Conduct cage operations</td>
</tr>
<tr>
<td>MNMULH312A</td>
<td>Operate winder for shaft sinking</td>
</tr>
<tr>
<td>MNMULH313A</td>
<td>Maintain winder equipment</td>
</tr>
<tr>
<td>MNMULH314A</td>
<td>Inspect and maintain shaft structures</td>
</tr>
<tr>
<td>MNMULH315A</td>
<td>Monitor, inspect and service ropes and attachments</td>
</tr>
</tbody>
</table>
MNC30104 Certificate III in Surface Coal Mining Operations

Characteristics of the Qualification

Descriptor: The Certificate III in Surface Coal Operations encompasses the role of employees such as production operators in an open cut coal mine who perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures.

Requirements: Successful completion of fifteen (15) units of competency made up of:

- nine (9) units of competency satisfying the criteria for the Certificate II in Surface Coal Operations

- six (6) elective units made up of:
  - a minimum of two (2) elective units of competency from the specified Coal Training Package Open Cut units listed
  - a maximum of four (4) units, relevant to the job function, drawn from the Coal Training Package or other endorsed Training Packages.

Note:

- The elective units of competency chosen to satisfy the Certificate III in Surface Coal Operations must be additional to the units of competency achieved to satisfy the Certificate II in Surface Coal Operations.

- The maximum number of units drawn from other endorsed Training Packages must not exceed four (4) units, including units from other endorsed Training Packages included in a Certificate II in Surface Coal Operations.
**MNC30104 Certificate III in Surface Coal Mining Operations**

**Completion of 15 units of competency**

<table>
<thead>
<tr>
<th>Open Cut</th>
<th>9 units of competency satisfying the criteria for the Certificate II in Surface Coal Operations</th>
</tr>
</thead>
</table>

**Elective Units**

6 units to be completed

| MNCO1010A | Conduct dragline operations |
| MNCO1011A | Conduct burden and coal drilling operations |
| MNCO1012A | Conduct rope/shovel operations |
| MNCO1013A | Conduct front end loader operations |
| MNCO1014A | Conduct haul truck operations |
| MNCO1015A | Conduct bulk water truck operations |
| MNCO1016A | Conduct grader operations |
| MNCO1017A | Conduct scraper operations |
| MNCO1018A | Conduct dozer operations |
| MNCO1019A | Conduct surface miner operations |
| MNCO1020A | Conduct auger miner operations |
| MNCO1021A | Conduct bucketwheel operations |
| MNCO1022A | Conduct spreader operations |
| MNCO1024A | Conduct wheeled dozer operations |
| MNCO1027A | Conduct hydraulic shovel operations |
| MNCO1030A | Conduct control centre operations |
| MNCO1033A | Conduct conveyor shifting dozer operations |
| MNCO1040B | Conduct shotfiring operations |
| MNCO1041B | Support shotfiring operations |

**General**

- BSBCMN313A Maintain environmental procedures
- BSBFLM302A Support leadership in the workplace
- BSBFLM303A Contribute to effective workplace relationships
- BSBFLM304A Participate in work teams
- MNCG1001A Apply risk management processes
- MNCG1005A Conduct fire team operations
- MNCG1008A Conduct safety and health investigations
- MNCG1009A Communicate information
- MNCG1010A Assess and implement life support systems and stabilise casualties
- MNCG1011A Extricate and transport people involved in incidents
- MNCG1013A Apply initial response first aid
- MNCG1027A Use keyboard skills and advanced functions of software packages to produce complex documents
- MNCG1029A Transfer information through a computer
- MNCG1030A Conduct purchasing
- MNCG1045A Conduct intermediate rigging operations
- MNCG1047A Conduct intermediate scaffolding operations
- MNCG1056A Install, commission and maintain major conveyor equipment and systems
- MNCG1057A Repair and splice conveyor belting
- MNCG1065A Operate multi combination vehicles on mine sites
- MNCG1068A Test operational functions of mine vehicles and equipment
- MNCG1069A Conduct conveyor-car high wall mining operations
- MNCG1070A Provide deck support for conveyor-car high wall mining operations

**Preparation and Treatment**

- MNCP1003A Control coal preparation plant operations
- MNCP1005A Conduct sampling operations
- MNCP1007A Conduct stockpile reclaimer operations
MNC30204 Certificate III in Coal Preparation

Characteristics of the Qualification

Descriptor: The Certificate III in Coal Preparation encompasses the role of employees such as production operators in a coal preparation and treatment plant who perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures.

Requirements: Successful completion of fifteen (15) units of competency made up of:

- nine (9) units of competency satisfying the criteria for the Certificate II in Coal Preparation
- six (6) elective units made up of:
  - a minimum of two (2) elective units of competency from the specified Coal Training Package Preparation and Treatment units listed
  - a maximum of four (4) units, relevant to the job function, drawn from the Coal Training Package or other endorsed Training Packages.

Note:

- The elective units of competency chosen to satisfy the Certificate III in Coal Preparation must be additional to the units of competency achieved to satisfy the Certificate II in Coal Preparation.
- The maximum number of units drawn from other endorsed Training Packages must not exceed four (4) units, including units from other endorsed Training Packages included in a Certificate II in Coal Preparation.
## MNC30204 Certificate III in Coal Preparation

**Completion of 15 units of competency**

9 units of competency satisfying the criteria for the Certificate II in Coal Preparation

### Preparation and Treatment

<table>
<thead>
<tr>
<th>Unit</th>
<th>Competency</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCP1001A</td>
<td>Handle raw coal</td>
</tr>
<tr>
<td>MNCP1002A</td>
<td>Monitor coal preparation plant operations</td>
</tr>
<tr>
<td>MNCP1003A</td>
<td>Control coal preparation plant operations</td>
</tr>
<tr>
<td>MNCP1004A</td>
<td>Treat and dispose of rejects and tailings</td>
</tr>
<tr>
<td>MNCP1005A</td>
<td>Conduct sampling operations</td>
</tr>
<tr>
<td>MNCP1006A</td>
<td>Conduct stockpile dozer operations</td>
</tr>
<tr>
<td>MNCP1007A</td>
<td>Conduct stockpile reclaimer operations</td>
</tr>
<tr>
<td>MNCP1008A</td>
<td>Conduct coal rail dispatch operations</td>
</tr>
<tr>
<td>MNCP1009A</td>
<td>Perform plant operational maintenance</td>
</tr>
</tbody>
</table>

### General Units

<table>
<thead>
<tr>
<th>Unit</th>
<th>Competency</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSBCM101A</td>
<td>Maintain environmental procedures</td>
</tr>
<tr>
<td>BSBCM102A</td>
<td>Support leadership in the workplace</td>
</tr>
<tr>
<td>BSBCM103A</td>
<td>Contribute to effective workplace relationships</td>
</tr>
<tr>
<td>BSBCM104A</td>
<td>Participate in work teams</td>
</tr>
<tr>
<td>MNCG1001A</td>
<td>Apply risk management processes</td>
</tr>
<tr>
<td>MNCG1008A</td>
<td>Conduct safety and health investigations</td>
</tr>
<tr>
<td>MNCG1009A</td>
<td>Communicate information</td>
</tr>
<tr>
<td>MNCG1010A</td>
<td>Assess and implement life support systems and stabilise casualties</td>
</tr>
<tr>
<td>MNCG1011A</td>
<td>Extricate and transport people involved in incidents</td>
</tr>
<tr>
<td>MNCG1013A</td>
<td>Apply initial response first aid</td>
</tr>
<tr>
<td>MNCG1027A</td>
<td>Use keyboard skills and advanced functions of software packages to produce complex documents</td>
</tr>
<tr>
<td>MNCG1029A</td>
<td>Transfer information through a computer</td>
</tr>
<tr>
<td>MNCG1030A</td>
<td>Conduct purchasing</td>
</tr>
<tr>
<td>MNCG1045A</td>
<td>Conduct intermediate rigging operations</td>
</tr>
<tr>
<td>MNCG1047A</td>
<td>Conduct intermediate scaffolding operations</td>
</tr>
<tr>
<td>MNCG1056A</td>
<td>Install, commission and maintain major conveyor equipment and systems</td>
</tr>
<tr>
<td>MNCG1057A</td>
<td>Repair and splice conveyor belting</td>
</tr>
<tr>
<td>MNCG1060A</td>
<td>Operate support equipment</td>
</tr>
<tr>
<td>MNCG1065A</td>
<td>Operate multi combination vehicle on mine sites</td>
</tr>
<tr>
<td>MNCG1068A</td>
<td>Test operational functions of production vehicles and equipment</td>
</tr>
</tbody>
</table>

### Open Cut

<table>
<thead>
<tr>
<th>Unit</th>
<th>Competency</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCO1013A</td>
<td>Conduct front end loader operations</td>
</tr>
<tr>
<td>MNCO1014A</td>
<td>Conduct haul truck operations</td>
</tr>
<tr>
<td>MNCO1015A</td>
<td>Conduct bulk water truck operations</td>
</tr>
<tr>
<td>MNCO1016A</td>
<td>Conduct grader operations</td>
</tr>
<tr>
<td>MNCO1036A</td>
<td>Conduct mobile crushing and screening operations</td>
</tr>
<tr>
<td>MNCO1040B</td>
<td>Conduct shotfiring operations</td>
</tr>
<tr>
<td>MNCO1041B</td>
<td>Support shotfiring operations</td>
</tr>
</tbody>
</table>

### Elective Units

- 6 units to be completed
- A minimum of 2 units from the Coal Training Package Preparation and Treatment units listed
- A maximum of 4 units, relevant to the job function, drawn from the Coal Training Package or other endorsed Training Packages

Elective Units:

- MNCP1001A
- MNCP1002A
- MNCP1003A
- MNCP1004A
- MNCP1005A
- MNCP1006A
- MNCP1007A
- MNCP1008A
- MNCP1009A
- BSBCM101A
- BSBCM102A
- BSBCM103A
- BSBCM104A
- MNCG1001A
- MNCG1008A
- MNCG1009A
- MNCG1010A
- MNCG1011A
- MNCG1013A
- MNCG1027A
- MNCG1029A
- MNCG1030A
- MNCG1045A
- MNCG1047A
- MNCG1056A
- MNCG1057A
- MNCG1060A
- MNCG1065A
- MNCG1068A
- MNCO1013A
- MNCO1014A
- MNCO1015A
- MNCO1016A
- MNCO1036A
- MNCO1040B
- MNCO1041B
MNC30307 Certificate III in Underground Coal Operations

Characteristics of the Qualification

Descriptor: The Certificate III in Underground Coal Operations encompasses the role of employees such as production operators in an underground coal mine who perform tasks involving a broad range of skilled applications applied in a wide variety of contexts, which may involve application of some discretion and judgement in selecting equipment, services or contingency measures.

Requirements: Successful completion of eighteen (18) units of competency made up of:

- twelve (12) units of competency satisfying the criteria for the Certificate II in Underground Coal Operations
- six (6) elective units made up of:
  - a minimum of two (2) elective units of competency from the specified Coal Training Package Underground units listed
  - a maximum of four (4) units, relevant to the job function, drawn from other endorsed Training Packages.

Note:

- The elective units of competency chosen to satisfy the Certificate III in Underground Coal Operations must be additional to the units of competency achieved to satisfy the Certificate II in Underground Coal Operations.
- The maximum number of units drawn from other endorsed Training Packages must not exceed four (4) units, including units from other endorsed Training Packages included in a Certificate II in Underground Coal Operations.
### MNC30307 Certificate III in Underground Coal Operations

**Completion of 18 units of competency**

**12 units of competency satisfying the criteria for the Certificate II in Underground Coal Operations**

#### Underground

<table>
<thead>
<tr>
<th>Unit Code</th>
<th>Competency Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCU1026A</td>
<td>Conduct environmental monitoring</td>
</tr>
<tr>
<td>MNCU1037A</td>
<td>Escape from hazardous situation unaided</td>
</tr>
<tr>
<td>MNCU1038A</td>
<td>Provide aided rescue to endangered personnel</td>
</tr>
<tr>
<td>MNCU1039A</td>
<td>Respond to in-seam incident</td>
</tr>
<tr>
<td>MNCU1048B</td>
<td>Conduct shotfiring</td>
</tr>
<tr>
<td>MNCU1049B</td>
<td>Support shotfiring operations</td>
</tr>
<tr>
<td>MNCU1050A</td>
<td>Conduct rotational drilling</td>
</tr>
<tr>
<td>MNCU1051A</td>
<td>Conduct directional drilling</td>
</tr>
<tr>
<td>MNCU1053A</td>
<td>Conduct basic strata control operations</td>
</tr>
<tr>
<td>MNCU1054A</td>
<td>Conduct specialised strata control operations</td>
</tr>
<tr>
<td>MNCU1066A</td>
<td>Construct and maintain ventilation devices</td>
</tr>
<tr>
<td>MNCU1070A</td>
<td>Conduct continuous miner operations</td>
</tr>
<tr>
<td>MNCU1071A</td>
<td>Conduct shuttle car operations</td>
</tr>
<tr>
<td>MNCU1073A</td>
<td>Conduct face ventilation operations</td>
</tr>
<tr>
<td>MNCU1074A</td>
<td>Conduct outburst mining operations</td>
</tr>
<tr>
<td>MNCU1075A</td>
<td>Conduct shearer operations</td>
</tr>
<tr>
<td>MNCU1076A</td>
<td>Conduct longwall face equipment operations</td>
</tr>
<tr>
<td>MNCU1078A</td>
<td>Install and recover longwall equipment</td>
</tr>
<tr>
<td>MNCU1079A</td>
<td>Operate breaker line supports</td>
</tr>
<tr>
<td>MNCU1080A</td>
<td>Conduct flexible conveyor train (FCT) operations</td>
</tr>
<tr>
<td>MNCU1095A</td>
<td>Monitor control processes</td>
</tr>
<tr>
<td>MNCU1101A</td>
<td>Apply spontaneous combustion management measures</td>
</tr>
</tbody>
</table>

#### General

<table>
<thead>
<tr>
<th>Unit Code</th>
<th>Competency Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCG1001A</td>
<td>Apply the risk management process</td>
</tr>
<tr>
<td>MNCG1005A</td>
<td>Conduct fire team operations</td>
</tr>
<tr>
<td>MNCG1008A</td>
<td>Conduct safety and health investigations</td>
</tr>
<tr>
<td>MNCG1009A</td>
<td>Communicate information</td>
</tr>
<tr>
<td>MNCG1013A</td>
<td>Apply initial response first aid</td>
</tr>
<tr>
<td>MNCG1027A</td>
<td>Use keyboard skills and advanced functions of software to produce documents</td>
</tr>
<tr>
<td>MNCG1028A</td>
<td>Use advanced functions of software packages to produce documents, reports and worksheets</td>
</tr>
<tr>
<td>MNCG1042A</td>
<td>Conduct slewing crane operations</td>
</tr>
<tr>
<td>MNCG1056A</td>
<td>Install, commission and maintain major conveyor equipment and systems</td>
</tr>
<tr>
<td>MNCG1057A</td>
<td>Repair and splice conveyor belting</td>
</tr>
<tr>
<td>MNCG1069A</td>
<td>Conduct conveyor car high wall mining operations</td>
</tr>
<tr>
<td>MNCG1070A</td>
<td>Provide deck support for conveyor car high wall mining operations</td>
</tr>
<tr>
<td>MNMULH204A</td>
<td>Conduct skip operations</td>
</tr>
<tr>
<td>MNMULH205A</td>
<td>Operate automated winder</td>
</tr>
<tr>
<td>MNMULH306A</td>
<td>Operate manual winder</td>
</tr>
<tr>
<td>MNMULH311A</td>
<td>Conduct cage operations</td>
</tr>
<tr>
<td>MNMULH312A</td>
<td>Operate winder for shaft sinking</td>
</tr>
<tr>
<td>MNMULH313A</td>
<td>Maintain winder equipment</td>
</tr>
<tr>
<td>MNMULH314A</td>
<td>Inspect and maintain shaft structures</td>
</tr>
<tr>
<td>MNMULH315A</td>
<td>Monitor, inspect and service ropes and attachments</td>
</tr>
<tr>
<td>BSBFLM302A</td>
<td>Support leadership in the workplace</td>
</tr>
<tr>
<td>BSBFLM303A</td>
<td>Contribute to effective workplace relationships</td>
</tr>
<tr>
<td>BSBFLM304A</td>
<td>Participate in work teams</td>
</tr>
</tbody>
</table>

**Elective units**

6 units to be completed

- a minimum of 2 units from the Coal Training Package units listed
- a maximum of 4 units, relevant to the job function, drawn from the Coal Training Package or other endorsed Training Packages

<table>
<thead>
<tr>
<th>Unit Code</th>
<th>Competency Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSBFLM304A</td>
<td>Participate in work teams</td>
</tr>
</tbody>
</table>
MNC40104 Certificate IV in Surface Coal Mining (Open Cut Examiner)

Characteristics of the Qualification

Descriptor: The Certificate IV in Surface Coal Mining (Open Cut Examiner) encompasses the role of employees undertaking the Open Cut Examiner function. They perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for the quantity and quality of the output of others and contribute to the development of technical solutions to non-routine problems.

Requirements: Successful completion of eleven (11) units of competency made up of:

- eight (8) mandatory units of competency (management and technical)
- three (3) elective units including:
  - a minimum of one (1) general unit
  - a minimum of one (1) unit drawn from the coal open cut units of competency, and
  - one (1) unit, relevant to the job function, drawn from the Coal Training Package or other endorsed Training Packages.
| Mandatory Units 8 units to be completed | | |
|----------------------------------------|-------------------------------------------------|
| MNCG1002B | Implement and apply risk management processes |
| MNCG1007A | Implement and monitor health and hygiene management systems |
| MNG1008A | Conduct safety and health investigations |
| MNC01115A | Apply and monitor surface mine emergency preparedness and response procedures |
| MNC01040B | Conduct shotfiring operations (mandatory in NSW) |
| MNC01041B | Support shotfiring operations (mandatory in Queensland) |
| MNC01042A | Examine and maintain mine safety |
| MNC01043A | Monitor the interaction of heavy and light vehicles and mining equipment |
| MNC01046A | Apply and monitor systems and methods of mining |
| Elective Units 3 units to be completed including: | | |
| - a minimum of 1 unit from the General units listed | | |
| MNC01009A | Communicate information |
| MNC01025A | Access, update and retrieve simple computerised information |
| MNC01026A | Operate computer to produce documents |
| MNC01027A | Use keyboard skills and advanced functions of software packages to produce complex documents |
| MNC01028A | Use advanced functions of software packages to produce documents, report and worksheets |
| MNC01029A | Transfer information through the computer |
| BSBCM402A | Develop work priorities |
| BSBCM404A | Develop teams and individuals |
| BSBCM410A | Coordinate implementation of customer service strategies |
| BSBCM412A | Promote innovation and change |
| BSBCM401A | Show leadership in the workplace |
| BSBCM403A | Manage effective workplace relationships |
| BSBCM404A | Lead work teams |
| BSBCM405A | Implement operational plan |
| BSBCM409A | Implement continuous improvement |
| - a minimum of 1 unit from the specified Open Cut units listed | | |
| MNC01010A | Conduct dragline operations |
| MNC01011A | Conduct burden and coal drilling operations |
| MNC01012A | Conduct rope/shovel operations |
| MNC01013A | Conduct front end loader operations |
| MNC01014A | Conduct haul truck operations |
| MNC01016A | Conduct grader operations |
| MNC01017A | Conduct scraper operations |
| MNC01018A | Conduct dozer operations |
| MNC01045A | Apply and monitor environmental management policies, plans and procedures (mandatory in NSW) |
| - a maximum of 1 unit relevant to the job function, drawn from the Coal Training Package or other endorsed Training Packages. | | |
MNC40204 Certificate IV in Surface Coal Mining

Characteristics of the Qualification

Descriptor: The Certificate IV in Surface Coal Mining encompasses the role of employees such as a supervisor/team leader in a surface coal mine. They perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for the quantity and quality of the output of others, contribute to the development of technical solutions to non-routine problems and apply mine management plans to the workplace.

Requirements: Successful completion of 14 units of competency made up of:

- six (6) mandatory units of competency
- eight (8) elective units including:
  - a minimum of two (2) units from the specified Technical Management units
  - a minimum of four (4) units from the specified General Management units
  - a maximum of two (2) units, relevant to the job function, drawn from the Coal Training Package or other endorsed Training Packages.
## MNC40204 Certificate IV in Surface Coal Mining

### Completion of 14 units of competency

<table>
<thead>
<tr>
<th>Mandatory Units 6 units to be completed</th>
<th>Technical Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCG1002B</td>
<td>Implement and apply risk management processes</td>
</tr>
<tr>
<td>MNCG1009A</td>
<td>Communicate information</td>
</tr>
<tr>
<td>MNCG1105A</td>
<td>Apply the mine occupational health and safety management plan</td>
</tr>
<tr>
<td>MNCO1103A</td>
<td>Apply pit plan</td>
</tr>
<tr>
<td>MNCO1115A</td>
<td>Apply and monitor surface mine emergency preparedness and response procedures</td>
</tr>
<tr>
<td>MNCO1045A</td>
<td>Apply and monitor environmental management policies, plans and procedures</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elective Units 8 units to be completed including:</th>
<th>Technical Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>• a minimum of 2 units from the specified Technical Management units</td>
<td>MNCG1005A Conduct fire team operations</td>
</tr>
<tr>
<td>• a minimum of 4 units from the specified General Management units</td>
<td>MNCG1007A Implement and monitor health and hygiene management systems</td>
</tr>
<tr>
<td>• a maximum of 2 units, relevant to the job function, drawn from the Coal Training Package or other endorsed Training Packages.</td>
<td>MNCG1008A Conduct safety and health investigations</td>
</tr>
<tr>
<td></td>
<td>MNCO1031A Coordinate conveyor system shift</td>
</tr>
<tr>
<td></td>
<td>MNCO1040B Conduct shotfiring operations</td>
</tr>
<tr>
<td></td>
<td>MNCO1041B Support shotfiring operations</td>
</tr>
<tr>
<td></td>
<td>MNCO1043A Monitor the interaction of heavy and light vehicles and mining equipment</td>
</tr>
<tr>
<td></td>
<td>MNCO1046A Apply and monitor systems and methods of mining</td>
</tr>
<tr>
<td></td>
<td>MNCO1047A Manage the interaction of light and heavy vehicles and mining equipment</td>
</tr>
<tr>
<td></td>
<td>MNCO107A Apply and monitor the site water management plan</td>
</tr>
<tr>
<td></td>
<td>MNCO1112A Apply and monitor the site stockpile management plan</td>
</tr>
<tr>
<td></td>
<td>MNCO117A Apply and monitor site plant and resource management plan</td>
</tr>
<tr>
<td></td>
<td>MNCO118A Supervise coal processing operations</td>
</tr>
<tr>
<td></td>
<td>MNCO122A Apply and monitor site waste and by-products management plan</td>
</tr>
<tr>
<td></td>
<td>MNCG1028A Use advanced functions of software packages to produce documents, reports and worksheets</td>
</tr>
<tr>
<td></td>
<td>MNCG1113A Apply quality management system</td>
</tr>
<tr>
<td></td>
<td>BSBCM402A Develop work priorities</td>
</tr>
<tr>
<td></td>
<td>BSBCM404A Develop teams and individuals</td>
</tr>
<tr>
<td></td>
<td>BSBCM410A Coordinate implementation of customer service strategies</td>
</tr>
<tr>
<td></td>
<td>BSBCM412A Promote innovation and change</td>
</tr>
<tr>
<td></td>
<td>BSBFML402A Show leadership in the workplace</td>
</tr>
<tr>
<td></td>
<td>BSBFML403A Manage effective workplace relationships</td>
</tr>
<tr>
<td></td>
<td>BSBFML404A Lead work teams</td>
</tr>
<tr>
<td></td>
<td>BSBFML405A Implement operational plan</td>
</tr>
<tr>
<td></td>
<td>BSBFML409A Implement continuous improvement</td>
</tr>
</tbody>
</table>
MNC40304 Certificate IV in Underground Coal Mining

Characteristics of the Qualification

Descriptor: The Certificate IV in Underground Coal Mining encompasses the role of employees such as mine supervisor/team leader/Deputy in an underground coal mine who perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for the quantity and quality of the output of others, contribute to the development of technical solutions to non-routine problems and apply mine management plans to the workplace.

Requirements: Successful completion of eleven (11) units of competency made up of:

- eight (8) mandatory units of competency
- three (3) elective units from the Technical Management and General Management units listed.
<table>
<thead>
<tr>
<th>Mandatory Units 8 units to be completed</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCG1002B</td>
<td>Implement and apply risk management processes</td>
</tr>
<tr>
<td>MNCU1104A</td>
<td>Apply the spontaneous combustion management plan</td>
</tr>
<tr>
<td>MNCU1108A</td>
<td>Apply and monitor the ventilation management plan</td>
</tr>
<tr>
<td>MNCU1113A</td>
<td>Apply and monitor the gas management plan</td>
</tr>
<tr>
<td>MNCU1113A</td>
<td>Apply and monitor the strata management plan</td>
</tr>
<tr>
<td>MNCU1138A</td>
<td>Apply and monitor mine transport systems and production equipment</td>
</tr>
<tr>
<td>MNCU1143A</td>
<td>Apply and monitor mine services and infrastructure systems</td>
</tr>
<tr>
<td>MNCU1153A</td>
<td>Apply and monitor mine emergency preparedness and response systems</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elective Units</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• 3 units to be completed from the Technical and General Management units listed</td>
<td></td>
</tr>
<tr>
<td><strong>Technical Management</strong></td>
<td></td>
</tr>
<tr>
<td>MNU1037A</td>
<td>Escape from hazardous situation unaided</td>
</tr>
<tr>
<td>MNU1038A</td>
<td>Provide aided rescue to endangered personnel</td>
</tr>
<tr>
<td>MNU1039A</td>
<td>Respond to in-seam incident</td>
</tr>
<tr>
<td>MNU1044A</td>
<td>Conduct special roadway operations</td>
</tr>
<tr>
<td>MNU1045A</td>
<td>Recover equipment</td>
</tr>
<tr>
<td>MNU1048B</td>
<td>Conduct shotfiring</td>
</tr>
<tr>
<td>MNU1049B</td>
<td>Support shotfiring operations</td>
</tr>
<tr>
<td>MNU1070A</td>
<td>Conduct continuous miner operations</td>
</tr>
<tr>
<td>MNU1071A</td>
<td>Conduct shuttle car operations</td>
</tr>
<tr>
<td>MNU1074A</td>
<td>Conduct outburst mining operations</td>
</tr>
<tr>
<td>MNU1075A</td>
<td>Conduct shearer operations</td>
</tr>
<tr>
<td>MNU1076A</td>
<td>Conduct longwall face equipment operations</td>
</tr>
<tr>
<td>MNU1118A</td>
<td>Apply and monitor the gas drainage management plan</td>
</tr>
<tr>
<td>MNCU123A</td>
<td>Apply and monitor the outburst management plan</td>
</tr>
<tr>
<td>MNU1128A</td>
<td>Apply and monitor the inrush management plan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General Management</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCG1007A</td>
<td>Implement and monitor health and hygiene management systems</td>
</tr>
<tr>
<td>MNCG1008A</td>
<td>Conduct safety and health investigations</td>
</tr>
<tr>
<td>MNCG1009A</td>
<td>Communicate information</td>
</tr>
<tr>
<td>MNCG1028A</td>
<td>Use advanced functions of software packages to product documents, reports and worksheets</td>
</tr>
<tr>
<td>BSBCMN402A</td>
<td>Develop work priorities</td>
</tr>
<tr>
<td>BSBCMN404A</td>
<td>Develop teams and individuals</td>
</tr>
<tr>
<td>BSBCMN410A</td>
<td>Coordinate implementation of customer service strategies</td>
</tr>
<tr>
<td>BSBCMN412A</td>
<td>Promote innovation and change</td>
</tr>
<tr>
<td>BSBFML402A</td>
<td>Show leadership in the workplace</td>
</tr>
<tr>
<td>BSBFML403A</td>
<td>Manage effective workplace relationships</td>
</tr>
<tr>
<td>BSBFML404A</td>
<td>Lead work teams</td>
</tr>
<tr>
<td>BSBFML405A</td>
<td>Implement operational plan</td>
</tr>
<tr>
<td>BSBFML409A</td>
<td>Implement continuous improvement</td>
</tr>
</tbody>
</table>
MNC50104 Diploma of Surface Coal Mining Management

Characteristics of the Qualification

Descriptor: The Diploma of Surface Coal Mining Management encompasses the role of mine managers in an open cut coal mine who perform tasks involving a high level of autonomy and requiring the application of significant judgement in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to demonstrate the application of a broad range of technical, managerial, coordination and planning and implement mine management plans.

Requirements: Successful completion of 14 units of competency made up of:

- two (2) mandatory units of competency
- twelve (12) elective units to be completed including:
  - a minimum of five (5) units from the specified Technical Management units
  - a minimum of four (4) units from the specified General Management units
  - a maximum of three (3) units, relevant to the job function, drawn from the Coal Training Package or other endorsed Training packages
## MNC50104 Diploma of Surface Coal Mining Management

**Completion of 14 units of competency**

<table>
<thead>
<tr>
<th>Mandatory Units 2 units to be completed</th>
<th>Technical Management</th>
<th>General Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCG1002B</td>
<td>Implement and apply risk management processes</td>
<td>MNCG1007A</td>
</tr>
<tr>
<td>MNCG1103A</td>
<td>Implement and maintain management systems to control risk</td>
<td>MNCG1081A</td>
</tr>
<tr>
<td>MNCO1044A</td>
<td>Manage laser levelling of operating plant</td>
<td>MNCG1119A</td>
</tr>
<tr>
<td>MNCO1046A</td>
<td>Apply and monitor systems and methods of mining</td>
<td>BSBFLM501A</td>
</tr>
<tr>
<td>MNCO1102A</td>
<td>Implement pit plan</td>
<td>BSBFLM502A</td>
</tr>
<tr>
<td>MNCO1106A</td>
<td>Implement the site water management plan</td>
<td>BSBFLM503A</td>
</tr>
<tr>
<td>MNCO1111A</td>
<td>Implement the stockpile management plan</td>
<td>BSBFLM504A</td>
</tr>
<tr>
<td>MNCO1116A</td>
<td>Implement mine plant and resource management plan</td>
<td>BSBFLM505A</td>
</tr>
<tr>
<td>MNCO1121A</td>
<td>Implement site waste and by-product management plan</td>
<td>BSBFLM509A</td>
</tr>
<tr>
<td>MNCO1126A</td>
<td>Implement and maintain the site plant, equipment and infrastructure maintenance plan</td>
<td>BSBFLM510A</td>
</tr>
<tr>
<td>MNCO1131A</td>
<td>Implement mine services systems</td>
<td>BSBFLM511A</td>
</tr>
<tr>
<td>MNCO1142A</td>
<td>Implement mine fixed plant and infrastructure systems</td>
<td>BSBSBM401A</td>
</tr>
<tr>
<td>BSBSBM402A</td>
<td>Manage finances</td>
<td>BSBSBM406A</td>
</tr>
</tbody>
</table>
MNC50204 Diploma of Underground Coal Mining Management

Characteristics of the Qualification

Descriptor: The Diploma of Underground Coal Mining Management encompasses a mine management role in an underground coal mine. These managers perform tasks involving a high level of autonomy and requiring the application of significant judgement in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to demonstrate the application of a broad range of technical, managerial, coordination and planning skills and implement mine management plans.

Requirements: Successful completion of eleven (11) units of competency made up of:

- eight (8) mandatory units of competency
- three (3) elective units from General and/or Technical Management units listed.
### MNC50204 Diploma of Underground Coal Mining Management

Completion of 11 units of competency

#### Mandatory Units 8 units to be completed

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCG1002B</td>
<td>Implement and apply risk management processes</td>
</tr>
<tr>
<td>MNCU1103A</td>
<td>Implement the spontaneous combustion management plan</td>
</tr>
<tr>
<td>MNCU1107A</td>
<td>Implement ventilation management plan</td>
</tr>
<tr>
<td>MNCU1112A</td>
<td>Implement the gas management plan</td>
</tr>
<tr>
<td>MNCU1132A</td>
<td>Implement strata management plan</td>
</tr>
<tr>
<td>MNCU1137A</td>
<td>Implement mine transport systems and production equipment</td>
</tr>
<tr>
<td>MNCU1142A</td>
<td>Implement mine services and infrastructure systems</td>
</tr>
<tr>
<td>MNCU1152A</td>
<td>Implement mine emergency management system</td>
</tr>
</tbody>
</table>

#### Elective Units

- 3 units to be completed from the General Management and Technical units listed.

#### Technical Management

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCG1007A</td>
<td>Implement and monitor health and hygiene management systems</td>
</tr>
<tr>
<td>MNCG1081A</td>
<td>Implement, monitor and report on contracts</td>
</tr>
<tr>
<td>MNCG1082A</td>
<td>Implement, monitor, rectify and report on inventory control system</td>
</tr>
<tr>
<td>MNCU1048B</td>
<td>Conduct shotfiring</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>MNCU1049B</td>
<td>Support shotfiring operations</td>
</tr>
<tr>
<td>MNCU1109A</td>
<td>Manage, operate and maintain the mine ventilation system</td>
</tr>
<tr>
<td>MNCU1117A</td>
<td>Implement the gas drainage management plan</td>
</tr>
<tr>
<td>MNCU1122A</td>
<td>Implement the outburst management plan</td>
</tr>
<tr>
<td>MNCU1127A</td>
<td>Implement the inrush management plan</td>
</tr>
</tbody>
</table>

#### General Management

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCG1008A</td>
<td>Conduct safety and health investigations</td>
</tr>
<tr>
<td>MNCG1009A</td>
<td>Communicate information</td>
</tr>
<tr>
<td>BSFLM501A</td>
<td>Manage personal work priorities and professional development</td>
</tr>
<tr>
<td>BSFLM502A</td>
<td>Provide leadership in the workplace</td>
</tr>
<tr>
<td>BSFLM503A</td>
<td>Establish effective workplace relationships</td>
</tr>
<tr>
<td>BSFLM504A</td>
<td>Facilitate work teams</td>
</tr>
<tr>
<td>BSFLM505A</td>
<td>Manage operational plan</td>
</tr>
<tr>
<td>BSFLM509A</td>
<td>Promote continuous improvement</td>
</tr>
<tr>
<td>BSFLM510A</td>
<td>Facilitate and capitalise on change and innovation</td>
</tr>
<tr>
<td>BSFLM511A</td>
<td>Develop a workplace learning environment</td>
</tr>
<tr>
<td>BSBSBM401A</td>
<td>Establish business and legal requirements</td>
</tr>
<tr>
<td>BSBSBM402A</td>
<td>Undertake financial planning</td>
</tr>
<tr>
<td>BSBSBM406A</td>
<td>Manage finances</td>
</tr>
</tbody>
</table>
MNC50304 Diploma of Mine Mechanical Engineering

Characteristics of the Qualification

Descriptor: The Diploma of Mine Mechanical Engineering encompasses the role of a person working in a coal mine undertaking the function of a mine mechanical engineer. The tasks performed involve a high level of autonomy and require the application of significant judgment in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to demonstrate the application of a broad range of technical, managerial, coordination and planning skills.

Requirements: Successful completion of eight (8) units of competency made up of:

- four (4) mandatory units of competency
- four (4) elective units, including:
  - a minimum of two (2) units to be selected from the Technical units and People and Financial Management units listed
  - a maximum of two (2) units relevant to the job function drawn from the Diploma of Mine Mechanical Engineering or the Advanced Diploma of Mine Mechanical Engineering or other endorsed Training Packages.

Entry requirements for this qualification are a mechanical engineering trade qualification or higher.
## MNC50304 Diploma of Mine Mechanical Engineering
### Completion of 8 units of competency

<table>
<thead>
<tr>
<th>Mandatory units 4 to be completed</th>
<th>Mandatory units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCG1002B</td>
<td>Implement and apply risk management processes</td>
</tr>
<tr>
<td>MNCG1083A</td>
<td>Implement, monitor, rectify and report on maintenance management systems</td>
</tr>
<tr>
<td>MNCG1084A</td>
<td>Implement, monitor, rectify and report on plant, services and infrastructure systems</td>
</tr>
<tr>
<td>MNCU1156A</td>
<td>Implement the underground mine mechanical plant management plan</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>MNCO1146A</td>
<td>Implement the surface mine mechanical plant management plan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elective units 4 to be completed including</th>
</tr>
</thead>
<tbody>
<tr>
<td>• A minimum of 2 units to be selected from the Technical units and People and Financial Management units listed</td>
</tr>
<tr>
<td>• A maximum of 2 units, relevant to the job function, drawn from the units listed in the Diploma of Mine Mechanical Engineering or the Advanced Diploma of Mine Mechanical Engineering or other endorsed Training Packages</td>
</tr>
<tr>
<td>Technical units</td>
</tr>
<tr>
<td>MNCG1056A</td>
</tr>
<tr>
<td>MNCG1082A</td>
</tr>
<tr>
<td>MNCG1091A</td>
</tr>
<tr>
<td>MNCO1047A</td>
</tr>
<tr>
<td>People and Financial Management (includes contractors, suppliers and consultants)</td>
</tr>
<tr>
<td>MNCG1081A</td>
</tr>
<tr>
<td>BSBMGT502A</td>
</tr>
<tr>
<td>BSBMGT503A</td>
</tr>
<tr>
<td>BSBMGT504A</td>
</tr>
<tr>
<td>BSBFLM501A</td>
</tr>
<tr>
<td>BSBFLM502A</td>
</tr>
<tr>
<td>BSBFLM503A</td>
</tr>
<tr>
<td>BSBFLM504A</td>
</tr>
<tr>
<td>BSBFLM505A</td>
</tr>
<tr>
<td>BSBFLM506A</td>
</tr>
<tr>
<td>BSBFLM507A</td>
</tr>
<tr>
<td>BSBFLM509A</td>
</tr>
<tr>
<td>BSBFLM510A</td>
</tr>
<tr>
<td>BSBFLM511A</td>
</tr>
</tbody>
</table>
MNC50404 Diploma of Mine Electrical Engineering

Characteristics of the Qualification

Descriptor: The Diploma of Mine Electrical Engineering covers the role of a person working in a coal mine undertaking the function of a mine electrical engineer. The tasks performed involve a high level of autonomy and require the application of significant judgement in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to demonstrate the application of a broad range of technical, managerial, coordination and planning skills.

Requirements: Successful completion of ten (10) units of competency made up of:

- five (5) mandatory units of competency
- five (5) elective units, including
  - a minimum of two (2) units from the Technical Management units listed
  - a minimum of one (1) unit from the People Management units listed
  - a maximum of two (2) units relevant to the job function, from the units listed in the Diploma of Electrical Engineering, the Advanced Diploma of Electrical Engineering or other endorsed Training Packages.

A person seeking entry to the Diploma of Mine Electrical Engineering must be able to demonstrate that they have the requisite underpinning knowledge and skills to meet the requirements of the specified Electrotechnology units of competency imported from the National Electrotechnology Training Package. The required underpinning knowledge and skills may be demonstrated through RPL and/or training and assessment.
<table>
<thead>
<tr>
<th>Mandatory Units 5 units to be completed</th>
<th>Technical Management</th>
<th>People Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCG1002B</td>
<td>MNC50404 Diploma of Mine Electrical Engineering</td>
<td>Implement and apply risk management processes</td>
</tr>
<tr>
<td>UTENES602 (A to Z qualifier) A</td>
<td></td>
<td>Develop commissioning programs for apparatus and circuits</td>
</tr>
<tr>
<td>UTENES603 (A to Z qualifier) A</td>
<td></td>
<td>Develop maintenance programs for apparatus and circuits</td>
</tr>
<tr>
<td>UTENES606 (A to Z qualifier) A</td>
<td></td>
<td>Coordinate and manage installation projects</td>
</tr>
<tr>
<td>MNCG1090A</td>
<td></td>
<td>Establish and maintain the mine electrical installations, reticulation and protection system</td>
</tr>
</tbody>
</table>

Elective Units 5 units to be completed including:

- a minimum of 2 units selected from the Technical Management units listed
- a minimum of 1 unit selected from the People management units listed
- A maximum of 2 units, relevant to the job function, from the units listed in the Diploma of Electrical Engineering, the Advanced Diploma of Electrical Engineering or other endorsed Training Packages.

<table>
<thead>
<tr>
<th>Technical Management</th>
<th>People Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTENES010A</td>
<td>MNCG1081A</td>
</tr>
<tr>
<td>UTENES012 (A to Z qualifier) A</td>
<td>MNCG1082A</td>
</tr>
<tr>
<td>UTENES017 (A to Z qualifier) A</td>
<td>MNCG1009A</td>
</tr>
<tr>
<td>UTENES214 (A to Z qualifier) A</td>
<td>BSBMGT502A</td>
</tr>
<tr>
<td>UTENES215 (A to Z qualifier) A</td>
<td>BSBMGT503A</td>
</tr>
<tr>
<td>UTENES216 (A to Z qualifier) A</td>
<td>BSBMGT504A</td>
</tr>
<tr>
<td>UTENES303 (A to Z qualifier) A</td>
<td>BSBMGT602A</td>
</tr>
<tr>
<td>UTENES404 (A to Z qualifier) A</td>
<td>BSBMGT604A</td>
</tr>
<tr>
<td>UTENES407 (A to Z qualifier) A</td>
<td>BSBFLM501A</td>
</tr>
<tr>
<td>UTENES408 (A to Z qualifier) A</td>
<td>BSBFLM502A</td>
</tr>
<tr>
<td>UTENES409 (A to Z qualifier) A</td>
<td>BSBFLM503A</td>
</tr>
<tr>
<td>UTENES503 (A to Z qualifier) A</td>
<td>BSBFLM504A</td>
</tr>
<tr>
<td>UTENES510A</td>
<td>BSBFLM505A</td>
</tr>
<tr>
<td>UTENES511A</td>
<td>BSBFLM506A</td>
</tr>
<tr>
<td>UTENES512A</td>
<td>BSBFLM507A</td>
</tr>
<tr>
<td>UTENES513A</td>
<td>BSBFLM509A</td>
</tr>
<tr>
<td>UTENES514A</td>
<td>BSBFLM510A</td>
</tr>
<tr>
<td>UTENES515A</td>
<td>BSBFLM511A</td>
</tr>
</tbody>
</table>
MNC50504 Diploma of Mine Surveying

Characteristics of the Qualification

Descriptor: The Diploma of Mine Surveying covers the role of a person working in a coal mine, underground or surface, undertaking the function of a mine surveyor. The tasks performed involve a high level of autonomy and require the application of significant judgement in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to demonstrate the application of a broad range of technical, managerial, coordination and planning skills.

Requirements: Successful completion will require competency in 19 units of competency that relate to work which can be defined as relevant to AQF 5. This includes the units of competency contained in the Diploma of Spatial Information from the Property Services Training Package PRD01. The 19 units are made up of:

- four (4) Mandatory Coal Mining units of competency
- eleven (11) Mandatory Property Services units of competency
- four (4) Elective Property Services units of competency from those listed.
<table>
<thead>
<tr>
<th>Mandatory Units 15 units to be completed</th>
<th>Elective units 4 to be completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCG1000A Conduct mine surveying operations</td>
<td>PRDSIS03A Implement a project plan</td>
</tr>
<tr>
<td>MNCC1001B Work safely</td>
<td>PRDSIS05A Determine suitable sources of information for the creation of new spatial data sets</td>
</tr>
<tr>
<td>MNCG1002B Implement and apply risk management processes</td>
<td>PRDSIS13A Design a spatial data storage system</td>
</tr>
<tr>
<td>MNCG1009A Communicate information</td>
<td>PRDSIS20A Design project deliverables</td>
</tr>
<tr>
<td>PRDSIS04A Determine spatial data requirements to meet the deliverables</td>
<td>PRDSIS24A Maintain financial records</td>
</tr>
<tr>
<td>PRDSIS06A Plan data collection and validation</td>
<td>PRDSIS25A Lead and supervise teams</td>
</tr>
<tr>
<td>PRDSIS07A Capture new data</td>
<td>PRDSIS27A Maintain client relations</td>
</tr>
<tr>
<td>PRDSIS08A Obtain and validate existing data</td>
<td>PRDSIS22A Control and monitor the spatial components of the project</td>
</tr>
<tr>
<td>PRDSIS14A Integrate spatial data sets</td>
<td>PRSIR39A Manage occupational health and safety in the workplace</td>
</tr>
<tr>
<td>PRDSIS15A Maintain spatial data</td>
<td>PRDSIS16A Store and retrieve spatial data</td>
</tr>
<tr>
<td>PRDSIS18A Produce project deliverables</td>
<td>PRDSIS19A Collate and interpret data</td>
</tr>
<tr>
<td>PRDSIS13A Design spatial data storage system</td>
<td>PRDSIS20A Design project deliverables</td>
</tr>
<tr>
<td>PRDSIS24A Maintain financial records</td>
<td>PRDSIS25A Lead and supervise teams</td>
</tr>
<tr>
<td>PRDSIS27A Maintain client relations</td>
<td>PRSIR31A Undertake process improvement to reduce costs and improve quality service</td>
</tr>
</tbody>
</table>
MNC60104 Advanced Diploma of Surface Coal Mining Management

Characteristics of the Qualification

Descriptor: The Advanced Diploma of Surface Coal Mining Management covers the role of open cut coal mine managers who perform tasks that are broad, specialised, complex and technical and include strategic areas and initiating activities. They are required to demonstrate self-directed application of theoretical and technical knowledge and initiate solutions to technical problems or management requirements.

Requirements: Successful completion of 14 units of competency made up of:

- six (6) mandatory units of competency
- eight (8) elective units including:
  - four (4) units from the specified Technical Management units
  - four (4) units from the specified General Management units
<table>
<thead>
<tr>
<th>MNC60104 Advanced Diploma of Surface Coal Mining Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion of 14 units of competency</td>
</tr>
<tr>
<td>Mandatory Units 6 units to be completed</td>
</tr>
<tr>
<td>MNCG1003A Establish the risk management system</td>
</tr>
<tr>
<td>MNCG1101A Establish and maintain the environmental management system</td>
</tr>
<tr>
<td>MNCG1102A Establish the statutory compliance management system</td>
</tr>
<tr>
<td>MNCG1107A Establish and maintain the mine Occupational Health and Safety management system</td>
</tr>
<tr>
<td>MNCG1111A Establish and maintain the quality system</td>
</tr>
<tr>
<td>MNCG1116A Establish mine emergency preparedness and response systems</td>
</tr>
<tr>
<td>Elective Units 8 units to be completed including:</td>
</tr>
<tr>
<td>• 4 units from the specified Technical Management units</td>
</tr>
<tr>
<td>MNCO1101A Plan pit development</td>
</tr>
<tr>
<td>MNCO1105A Establish the mine water management system</td>
</tr>
<tr>
<td>MNCO1110A Establish the mine stockpile management system</td>
</tr>
<tr>
<td>MNCO1120A Establish waste and by-product management system</td>
</tr>
<tr>
<td>MNCO1125A Establish plant, equipment and infrastructure maintenance system</td>
</tr>
<tr>
<td>MNCO1130A Establish mine services system</td>
</tr>
<tr>
<td>MNCO1135A Establish ground control and slope stability systems</td>
</tr>
<tr>
<td>MNCO1140A Establish the mine infrastructure and fixed plant systems</td>
</tr>
<tr>
<td>• 4 units from the specified General Management units</td>
</tr>
<tr>
<td>MNCG1119A Manage major incidents and emergencies</td>
</tr>
<tr>
<td>MNCG1125A Initiate, monitor and supervise contracts</td>
</tr>
<tr>
<td>MNCG1126A Conduct business negotiations</td>
</tr>
<tr>
<td>BSBMGT601A Contribute to strategic direction</td>
</tr>
<tr>
<td>BSBMGT603A Review and develop business plans</td>
</tr>
<tr>
<td>BSBMGT605A Provide leadership across the organisation</td>
</tr>
<tr>
<td>BSBMGT607A Manage knowledge and information</td>
</tr>
<tr>
<td>BSBMGT608A Manage innovation and continuous improvement</td>
</tr>
<tr>
<td>BSBMGT503A Prepare budgets and financial plans</td>
</tr>
</tbody>
</table>

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MNC04 Coal Training Package to be reviewed by 31 May 2007 - Version 2
MNC60204 Advanced Diploma of Underground Coal Mining Management

Characteristics of the Qualification

Descriptor: The Advanced Diploma of Underground Coal Mining Management covers the role of mine managers who perform tasks that are broad, specialised, complex and technical and include strategic areas and initiating activities. They are required to demonstrate self-directed application of theoretical and technical knowledge and initiate solutions to technical problems or management requirements.

Requirements: Successful completion of eleven (11) units of competency made up of:

- eight (8) mandatory units of competency
- three (3) elective units
MNC60204 Advanced Diploma Underground Coal Mining Management

Completion of 11 units of competency

<table>
<thead>
<tr>
<th>Mandatory Units 8 units to be completed</th>
<th>Elective Units 3 units to be completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCG1003A Establish the risk management system</td>
<td>General Management</td>
</tr>
<tr>
<td>MNCU1102A Establish the spontaneous combustion management plan</td>
<td>MNCG1109A Manage, operate and maintain mine ventilation system</td>
</tr>
<tr>
<td>MNCU1106A Establish the ventilation management plan</td>
<td>MNCU1116A Establish the gas drainage management plan</td>
</tr>
<tr>
<td>MNCU1111A Establish the gas management system</td>
<td>MNCU1121A Establish the outburst management plan</td>
</tr>
<tr>
<td>MNCU1131A Establish the mining method and strata management systems</td>
<td>MNCU1126A Establish the inrush management plan</td>
</tr>
<tr>
<td>MNCU1136A Establish mine transport systems and production equipment</td>
<td>MNGCG1006A Incorporate health and hygiene factors into mine management</td>
</tr>
<tr>
<td>MNCU1141A Establish the mine services and infrastructure systems</td>
<td>MNCG1101A Establish and maintain the environmental management system</td>
</tr>
<tr>
<td>MNCU1151A Establish mine emergency preparedness and response systems</td>
<td>MNCG1102A Establish the statutory compliance management system</td>
</tr>
</tbody>
</table>

| MNCU1125A Initiate, monitor and supervise contracts |
| MNCG1126A Conduct business negotiations |
| BSBMGT503A Prepare budgets and financial plans |
| BSBMGT601A Contribute to strategic direction |
| BSBMGT603A Review and develop business plans |
| BSBMGT605A Provide leadership across the organisation |
| BSBMGT607A Manage knowledge and information |
| BSBMGT608A Manage innovation and continuous improvement |
MNC60304 Advanced Diploma of Mine Mechanical Engineering

Characteristics of the Qualification

Descriptor: The Advanced Diploma of Mine Mechanical Engineering covers the role of a person working in a coal mine undertaking the function of a mine mechanical engineer. The tasks performed involve tasks that are broad, specialised, complex and technical and include strategic areas and initiating activities. They are required to demonstrate self-directed application of theoretical and technical knowledge and initiate solutions to technical problems or management requirements.

Units are provided so that the qualification can be customised for both underground and surface mines.

Requirements: Mandatory Mechanical Engineering knowledge and skills. As an interim measure Mechanical Engineering knowledge and skills currently available through accredited courses such as the Advanced Diploma of Mechanical Engineering or equivalent, or a degree in Mechanical Engineering will be recognised as an entry level requirements for this qualification. Once the Advanced Diploma of Mechanical Engineering is available in the MEM Training Package the relevant units of competency will be identified as relevant for the Advanced Diploma in Mine Mechanical Engineering.

Successful completion of units of competency made up of:

- five (5) mandatory Coal Technical units of competency specified
- two (2) elective units to be selected from People and Financial Management units listed or units relevant to the job function from other endorsed Training Packages
MNC60304 Advanced Diploma of Mine Mechanical Engineering

Completion of 7 coal relevant units of competency

### Mandatory Mechanical Engineering knowledge and skills

- As an interim measure Mechanical Engineering knowledge and skills currently available through accredited courses such as the Advanced Diploma of Mechanical Engineering or equivalent, or a degree in Mechanical Engineering will be recognised as an entry level requirements for this qualification. Once the Advanced Diploma of Mechanical Engineering is available in the MERS Training Package the relevant units of competency will be identified as relevant for the Advanced Diploma in Mine Mechanical Engineering.

### Mandatory Coal Technical units

<table>
<thead>
<tr>
<th>Unit Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCG1003A</td>
<td>Establish the risk management system</td>
</tr>
<tr>
<td>MNCG1128A</td>
<td>Establish mine mechanical plant services and infrastructure systems</td>
</tr>
<tr>
<td>MNCG1129A</td>
<td>Establish the mechanical standards and engineering practice for transport and production equipment</td>
</tr>
<tr>
<td>MNCG1130A</td>
<td>Establish maintenance management system for mechanical plant and equipment</td>
</tr>
<tr>
<td>MNCU1155A</td>
<td>Establish an underground mine mechanical plant management system</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>MNCO1145A</td>
<td>Establish a surface mine mechanical plant management system</td>
</tr>
</tbody>
</table>

### Elective Units 2 units to be completed from the People and Financial Management units listed or units relevant to the job function from other endorsed Training Packages

<table>
<thead>
<tr>
<th>Unit Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCG1125A</td>
<td>Initiate, monitor and supervise contracts</td>
</tr>
<tr>
<td>BSBMGT502A</td>
<td>Manage people performance</td>
</tr>
<tr>
<td>BSBMGT503A</td>
<td>Prepare budgets and financial plans</td>
</tr>
<tr>
<td>BSBMGT504A</td>
<td>Manage budgets and financial plans</td>
</tr>
<tr>
<td>BSBMGT602A</td>
<td>Contribute to the development and implementation of strategic plans</td>
</tr>
<tr>
<td>BSBMGT610A</td>
<td>Manage environmental management systems</td>
</tr>
<tr>
<td>BSBFLM501A</td>
<td>Manage personal work priorities and professional development</td>
</tr>
<tr>
<td>BSBFLM502A</td>
<td>Provide leadership in the workplace</td>
</tr>
<tr>
<td>BSBFLM503A</td>
<td>Establish effective workplace relationships</td>
</tr>
<tr>
<td>BSBFLM504A</td>
<td>Facilitate work teams</td>
</tr>
<tr>
<td>BSBFLM505A</td>
<td>Manage operational plan</td>
</tr>
<tr>
<td>BSBFLM509A</td>
<td>Promote continuous improvement</td>
</tr>
<tr>
<td>BSBFLM510A</td>
<td>Facilitate and capitalise on change and innovation</td>
</tr>
<tr>
<td>BSBFLM511A</td>
<td>Develop a workplace learning environment</td>
</tr>
</tbody>
</table>
MNC60404 Advanced Diploma of Mine Electrical Engineering

Characteristics of the Qualification

Descriptor: The Advanced Diploma of Mine Electrical Engineering covers the role of a person working in a coal mine undertaking the function of a mine electrical engineer. The tasks performed involve tasks that are broad, specialised, complex and technical and include strategic areas and initiating activities. They are required to demonstrate self-directed application of theoretical and technical knowledge and initiate solutions to technical problems or management requirements.

Requirements: Successful completion of 15 units of competency made up of:

- eight (8) mandatory units of competency
- seven (7) elective units of competency.
  - a minimum of three (3) units from the Technical Management units listed
  - a minimum of one (1) unit from the People Management units listed
  - a maximum of three (3) units, relevant to the job function, from the units listed in the Diploma of Electrical Engineering, the Advanced Diploma of Electrical Engineering or other endorsed Training Packages.

A person seeking entry to the Advanced Diploma of Mine Electrical Engineering must be able to demonstrate that they have the requisite underpinning knowledge and skills to meet the requirements of the specified Electrotechnology units of competency imported from the National Electrotechnology Training Package. The required underpinning knowledge and skills may be demonstrated through RPL and/or training and assessment.

The units of competency completed in the Diploma of Mine Electrical Engineering maybe counted towards the Advanced Diploma of Mine Electrical Engineering.
## MNC60404 Advanced Diploma of Mine Electrical Engineering

**Completion of 15 units of competency**

<table>
<thead>
<tr>
<th>Mandatory Units 8 units to be completed</th>
<th>Technical Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCG1003A Establish the risk management system</td>
<td>UTENES010A Report on the integrity of explosion-protected equipment in hazardous areas</td>
</tr>
<tr>
<td>MNCG1090A Establish and maintain the mine electrical installations, reticulation and protection system</td>
<td>UTENES407 (A to Z qualifier) A Assess explosion protected equipment for conformance with standards</td>
</tr>
<tr>
<td>UTENES304 (A to Z qualifier) A Undertake commissioning of advanced systems and apparatus</td>
<td>UTENES408 (A to Z qualifier) A Test installations in hazardous areas</td>
</tr>
<tr>
<td>UTENES406 (A to Z qualifier) A Develop complex testing and evaluation procedures</td>
<td>UTENES410 (A to Z qualifier) A Inspect in detail hazardous area installations</td>
</tr>
<tr>
<td>UTENES504 (A to Z qualifier) A Diagnose and rectify faults in advanced systems and apparatus</td>
<td>UTENES604 (A to Z qualifier) A Coordinate and manage commissioning processes</td>
</tr>
<tr>
<td>UTENES602 (A to Z qualifier) A Develop commissioning programs for apparatus and circuits</td>
<td>UTENES605 (A to Z qualifier) A Coordinate and manage routine maintenance</td>
</tr>
<tr>
<td>UTENES603 (A to Z qualifier) A Develop maintenance programs for apparatus and circuits</td>
<td>UTENES609 (A to Z qualifier) A Develop and manage maintenance programs for hazardous electrical equipment</td>
</tr>
<tr>
<td>UTENES606 (A to Z qualifier) A Coordinate and manage installation projects</td>
<td>UTENES701 (A to Z qualifier) A Redesign and develop modifications to apparatus and associated systems’ circuits</td>
</tr>
<tr>
<td>UTENES605 (A to Z qualifier) A Coordinate and manage commissioning processes</td>
<td>UTENES705 (A to Z qualifier) A Design and develop modifications to explosion protected equipment</td>
</tr>
<tr>
<td>UTENES607 (A to Z qualifier) A Design electrical installations in hazardous areas</td>
<td>UTENES707 (A to Z qualifier) A Design explosion protected electrical systems</td>
</tr>
<tr>
<td>UTENES608 (A to Z qualifier) A Design explosion protected electrical systems</td>
<td>UTENES708 (A to Z qualifier) A Design explosion protected electrical systems</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elective Units 7 units to be completed including:</th>
<th>People Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>• a minimum of 3 units from the technical Management units listed</td>
<td>MNCG1009A Communicate information</td>
</tr>
<tr>
<td>• a minimum of 1 units from the people Management units listed</td>
<td>MNCG1082A Implement, monitor, rectify and report on inventory control system</td>
</tr>
<tr>
<td>• a maximum of 3 units from the units listed in the Diploma of Electrical Engineering the</td>
<td>MNCG1125A Initiate, monitor and supervise contracts</td>
</tr>
<tr>
<td></td>
<td>BSBMGT502A Manage people performance</td>
</tr>
<tr>
<td></td>
<td>BSBMGT503A Prepare budgets and financial plans</td>
</tr>
<tr>
<td></td>
<td>BSBMGT504A Manage budgets and financial plans</td>
</tr>
<tr>
<td></td>
<td>BSBMGT602A Contribute to the development and implementation of strategic plans</td>
</tr>
<tr>
<td></td>
<td>BSBMGT604A Manage business operations</td>
</tr>
<tr>
<td></td>
<td>BSBFLM501A Manage personal work priorities and professional development</td>
</tr>
<tr>
<td></td>
<td>BSBFLM502A Provide leadership on the workplace</td>
</tr>
<tr>
<td></td>
<td>BSBFLM503A Establish effective workplace relationships</td>
</tr>
<tr>
<td></td>
<td>BSBFLM504A Facilitate work teams</td>
</tr>
<tr>
<td></td>
<td>BSBFLM505A Manage operational plan</td>
</tr>
<tr>
<td></td>
<td>BSBFLM509A Promote continuous improvement</td>
</tr>
<tr>
<td></td>
<td>BSBFLM510A Facilitate and capitalise on change and innovation</td>
</tr>
<tr>
<td>Advanced Diploma of Electrical Engineering or other endorsed Training Packages.</td>
<td>BSBFLM511A</td>
</tr>
</tbody>
</table>
The following table contains a summary of the employability skills as identified by the Coal Industry for this qualification. The employability skills facets described here are broad industry requirements that may vary depending on qualification packaging options.

<table>
<thead>
<tr>
<th>Employability Skill</th>
<th>Industry/enterprise requirements for this qualification include the following:</th>
</tr>
</thead>
</table>
| **Communication**      | • Speak clearly and directly  
                          • Listen carefully to instructions and information  
                          • Read and interpret work instructions and safety signs  
                          • Calculate basic weights, distances and volumes  
                          • Complete incident and maintenance reports          |
| **Teamwork**           | • Apply teamwork in a range of situations, particularly in a safety context  
                          • Contribute to the planning and execution of operations  
                          • Work cooperatively with people of different ages, gender, race, religion or political persuasion |
| **Problem solving**    | • Adjust work methods in response to changing weather and site conditions  
                          • Participate in team solutions to safety issues                  |
| **Initiative and enterprise** | • Independently adapt to changing work conditions or different work areas  
                                • Identify potential improvements to working practice and conditions  
                                • Identify and assess risks in the workplace                        |
| **Planning and organizing** | • Manage time and priorities to complete work  
                                 • Identify and obtain appropriate equipment and permits  
                                 • Identify potential hazards and prepare appropriate responses  
                                 • Follow procedures and techniques relevant to the equipment and work being done |
| **Self management**    | • Take responsibility for planning and organising own work priorities and completing assigned tasks  
                          • Monitor own performance to ensure work will be completed well and on time  
                          • Understand the standard of work expected at a work site                  |
| **Learning**           | • Be willing to learn new ways of working  
                          • Seek information to improve performance from people and workplace documents like policies, procedures etc.  
                          • Understand equipment characteristics, technical capabilities, limitations and procedures |
| **Technology**         | • Use technology to monitor and report on work progress  
                          • Use communications technology appropriate to the workplace (email, mobile, radio, etc)  
                          • Operate equipment safely                                         |
Employability Skills Summary

MNC30104 Certificate III in Surface Coal Mining Operations
MNC30204 Certificate III in Coal Preparation
MNC30307 Certificate III in Underground Coal Operations

The following table contains a summary of the employability skills as identified by the Coal Industry for this qualification. The employability skills facets described here are broad industry requirements that may vary depending on qualification packaging options.

<table>
<thead>
<tr>
<th>Employability Skill</th>
<th>Industry/enterprise requirements for this qualification include the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>• Speak clearly and directly&lt;br&gt;• Listen carefully to instructions and information&lt;br&gt;• Read and interpret work instructions and safety signs&lt;br&gt;• Calculate basic weights, distances and volumes&lt;br&gt;• Complete incident and maintenance reports</td>
</tr>
<tr>
<td>Teamwork</td>
<td>• Apply teamwork in a range of situations, particularly in a safety context&lt;br&gt;• Contribute to the planning and execution of operations&lt;br&gt;• Work cooperatively with people of different ages, gender, race, religion or political persuasion</td>
</tr>
<tr>
<td>Problem solving</td>
<td>• Adjust work methods in response to changing weather and site conditions&lt;br&gt;• Participate in team solutions to safety issues</td>
</tr>
<tr>
<td>Initiative and enterprise</td>
<td>• Independently adapt to changing work conditions or different work areas&lt;br&gt;• Identify potential improvements to working practice and conditions&lt;br&gt;• Identify and assess risks in the workplace</td>
</tr>
<tr>
<td>Planning and organizing</td>
<td>• Manage time and priorities to complete work&lt;br&gt;• Identify and obtain appropriate equipment and permits&lt;br&gt;• Identify potential hazards and prepare appropriate responses&lt;br&gt;• Follow procedures and techniques relevant to the equipment and work being done</td>
</tr>
<tr>
<td>Self management</td>
<td>• Take responsibility for planning and organising own work priorities and completing assigned tasks&lt;br&gt;• Monitor own performance to ensure work will be completed well and on time&lt;br&gt;• Understand the standard of work expected at a work site</td>
</tr>
<tr>
<td>Learning</td>
<td>• Be willing to learn new ways of working&lt;br&gt;• Seek information to improve performance from people and workplace documents like policies, procedures etc.&lt;br&gt;• Understand equipment characteristics, technical capabilities, limitations and procedures</td>
</tr>
<tr>
<td>Technology</td>
<td>• Use technology to monitor and report on work progress&lt;br&gt;• Use communications technology appropriate to the workplace (email, mobile, radio, etc)&lt;br&gt;• Operate equipment safely</td>
</tr>
</tbody>
</table>
Employability Skills Summary

MNC40104 Certificate IV in Surface Coal Mining (Open Cut Examiner)
MNC40204 Certificate IV in Surface Coal Mining
MNC40304 Certificate IV in Underground Coal Mining

The following table contains a summary of the employability skills as identified by the Coal Industry for this qualification. The employability skills facets described here are broad industry requirements that may vary depending on qualification packaging options.

<table>
<thead>
<tr>
<th>Employability Skill</th>
<th>Industry/enterprise requirements for this qualification include the following:</th>
</tr>
</thead>
</table>
| **Communication**   | • Provide clear and direct feedback  
                      • Listen carefully to instructions and information  
                      • Read and interpret project plans and safety signs  
                      • Calculate basic weights, distances and volumes  
                      • Complete accurate work plans, technical reports, risk assessments, etc.  
                      • Negotiate solutions to customer and workplace based issues  
                      • Negotiate project details with clients  
                      • Network with other professionals working in the same field |
| **Teamwork**        | • Plan and lead team performance and operations  
                      • Coordinate project activities and timelines with clients  
                      • Work cooperatively with people of different ages, gender, race, religion or political persuasion  
                      • Provide feedback and advice to staff  
                      • Participate in site-wide planning and coordination activities |
| **Problem solving** | • Re-allocate staff and resources in response to changing weather, site conditions and priorities  
                      • Work with staff to solve problems and coordinate team member’s responsibilities and activities  
                      • Work cooperatively with clients to resolve contract and operational issues  
                      • Participate in ongoing review and adjustment of operations against performance indicators and project milestones |
| **Initiative and enterprise** | • Act independently to identify potential improvements to working practice and conditions  
                      • Identify and take steps to resolve risks in the workplace.  
                      • Encourage the exploration and application of innovative approaches to improve on operational performance |
| **Planning and organizing** | • Manage and coordinate time and priorities for self and team  
                      • Identify and obtain appropriate personnel and resources for work  
                      • Ensure that risks are assessed and appropriate emergency plans are in place  
                      • Ensure that project planning incorporates the possibility of adapting to future changes |
| **Self management** | • Take responsibility for ensuring team targets and goals are achieved  
                      • Understand the standard of work expected at the work site |
### Employability Skills Summary

**Learning**
- Proactively manage team performance
- Develop trust and confidence in staff and customers
- Be willing to learn new ways of working
- Seek information to improve performance from people and workplace documents like policies, procedures etc.
- Understand equipment characteristics, technical capabilities, limitations and procedures
- Participate in, and where appropriate, lead change processes
- Work with staff to create learning and development plans
- Prepare and lead formal or informal training sessions

**Technology**
- Apply a range of basic IT skills in monitoring and reporting on systems
- Operate Equipment safely and according to manufacturer and workplace guidelines
- Use communications technology appropriate to the workplace (email, mobile, radio, etc)
- Computer technology is used to monitor and communicate project status
- Use IT to create documents and maintain records of work activities
Employability Skills Summary

MNC50104 Diploma of Surface Coal Mining Management
MNC50204 Diploma of Underground Coal Mining Management
MNC50304 Diploma of Mine Mechanical Engineering
MNC50404 Diploma of Mine Electrical Engineering
MNC50504 Diploma of Mine Surveying

The following table contains a summary of the employability skills as identified by the Coal Industry for this qualification. The employability skills facets described here are broad industry requirements that may vary depending on qualification packaging options.

<table>
<thead>
<tr>
<th>Employability Skill</th>
<th>Industry/enterprise requirements for this qualification include the following:</th>
</tr>
</thead>
</table>
| Communication               | • Provide clear and direct feedback  
                               • Listen carefully to instructions and information  
                               • Read and interpret project plans and safety signs  
                               • Calculate basic weights, distances and volumes  
                               • Complete accurate work plans, technical reports, risk assessments, etc.  
                               • Negotiate solutions to customer and workplace based issues  
                               • Negotiate project details with clients  
                               • Network with other professionals working in the same field                                                                 |
| Teamwork                    | • Plan and lead team performance and operations  
                               • Coordinate project activities and timelines with clients  
                               • Work cooperatively with people of different ages, gender, race, religion or political persuasion  
                               • Provide feedback and advice to staff  
                               • Lead site-wide planning and coordination activities                                                                 |
| Problem solving             | • Re-allocate staff and resources in response to changing weather, site conditions and priorities  
                               • Manage staff to solve problems and coordinate individual responsibilities and activities  
                               • Work cooperatively with clients to resolve contract and operational issues  
                               • Manage the ongoing review and adjustment of operations against performance indicators and project milestones |
| Initiative and enterprise   | • Act independently to identify potential improvements to working practice and conditions  
                               • Identify and take steps to resolve risks in the workplace.  
                               • Encourage the exploration and application of innovative approaches to improve on operational performance |
| Planning and organizing     | • Manage and coordinate time and priorities for self and team  
                               • Identify and obtain appropriate personnel and resources for work  
                               • Ensure that risks are assessed and appropriate emergency plans are in place  
                               • Ensure that project planning incorporates the possibility of adapting to future changes |
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| **Self management** | • Take responsibility for ensuring team targets and goals are achieved  
• Understand the standard of work expected at the work site  
• Proactively manage team performance  
• Develop trust and confidence in staff and customers |
| **Learning**   | • Be willing to learn new ways of working  
• Seek information to improve performance from people and workplace documents like policies, procedures etc.  
• Understand equipment characteristics, technical capabilities, limitations and procedures  
• Lead change and continuous improvement processes  
• Manage learning and development plans  
• Prepare and lead formal or informal training sessions |
| **Technology** | • Apply a range of basic IT skills in monitoring and reporting on systems  
• Operate Equipment safely and according to manufacturer and workplace guidelines  
• Use communications technology appropriate to the workplace (email, mobile, radio, etc)  
• Computer technology is used to monitor and communicate project status  
• Use IT to create documents and maintain records of work activities |
## Employability Skills Summary

MNC60104 Advanced Diploma of Surface Coal Mining Management  
MNC60204 Advanced Diploma of Underground Coal Mining Management  
MNC60304 Advanced Diploma of Mine Mechanical Engineering  
MNC60404 Advanced Diploma Mine Electrical Engineering

The following table contains a summary of the employability skills as identified by the Coal Industry for this qualification. The employability skills facets described here are broad industry requirements that may vary depending on qualification packaging options.

<table>
<thead>
<tr>
<th>Employability Skill</th>
<th>Industry/enterprise requirements for this qualification include the following:</th>
</tr>
</thead>
</table>
| **Communication**           | • Provide clear and direct feedback  
• Listen carefully to instructions and information  
• Read and interpret project plans and safety signs  
• Calculate basic weights, distances and volumes  
• Complete accurate work plans, technical reports, risk assessments, etc.  
• Negotiate solutions to customer and workplace based issues  
• Negotiate project details with clients  
• Network with other professionals working in the same field |
| **Teamwork**                | • Plan and lead team performance and operations  
• Coordinate project activities and timelines with clients  
• Work cooperatively with people of different ages, gender, race, religion or political persuasion  
• Provide feedback and advice to staff  
• Lead site-wide planning and coordination activities |
| **Problem solving**         | • Re-allocate staff and resources in response to changing weather, site conditions and priorities  
• Manage staff to solve problems and coordinate individual responsibilities and activities  
• Work cooperatively with clients to resolve contract and operational issues  
• Manage the ongoing review and adjustment of operations against performance indicators and project milestones |
| **Initiative and enterprise** | • Act independently to identify potential improvements to working practice and conditions  
• Identify and take steps to resolve risks in the workplace.  
• Encourage the exploration and application of innovative approaches to improve on operational performance |
| **Planning and organizing** | • Manage and coordinate time and priorities for self and team  
• Identify and obtain appropriate personnel and resources for work  
• Ensure that risks are assessed and appropriate emergency plans are in place  
• Ensure that project planning incorporates the possibility of adapting to future changes |
**Self management**
- Take responsibility for ensuring team targets and goals are achieved
- Understand the standard of work expected at the work site
- Proactively manage team performance
- Develop trust and confidence in staff and customers

**Learning**
- Be willing to learn new ways of working
- Seek information to improve performance from people and workplace documents like policies, procedures etc.
- Understand equipment characteristics, technical capabilities, limitations and procedures
- Lead change and continuous improvement processes
- Manage learning and development plans
- Prepare and lead formal or informal training sessions

**Technology**
- Apply a range of basic IT skills in monitoring and reporting on systems
- Operate Equipment safely and according to manufacturer and workplace guidelines
- Use communications technology appropriate to the workplace (email, mobile, radio, etc)
- Computer technology is used to monitor and communicate project status
- Use IT to create documents and maintain records of work activities
Assessment Guidelines

Introduction

These Assessment Guidelines provide the endorsed framework for assessment of units of competency in this Training Package. They are designed to ensure that assessment is consistent with the Australian Quality Training Framework (AQTF) Standards for Registered Training Organisations. Assessments against the units of competency in this Training Package must be carried out in accordance with these Assessment Guidelines.

Assessment System Overview

This section provides an overview of the requirements for assessment when using this Training Package, including a summary of the AQTF requirements; licensing/registration requirements; and assessment pathways.

Benchmarks for Assessment

Assessment within the National Training Framework is the process of collecting evidence and making judgements about whether competency has been achieved to confirm whether an individual can perform to the standards expected in the workplace, as expressed in the relevant endorsed unit of competency.

In the areas of work covered by this Training Package, the endorsed units of competency are the benchmarks for assessment. As such, they provide the basis for nationally recognised Australian Qualifications Framework (AQF) qualifications and Statements of Attainment issued by Registered Training Organisations (RTOs).

Australian Quality Training Framework Assessment Requirements

Assessment leading to nationally recognised AQF qualifications and Statements of Attainment in the vocational education and training sector must meet the requirements of the AQTF as expressed in the Standards for Registered Training Organisations.

The Standards for Registered Training Organisations can be downloaded from the DEST website at www.dest.gov.au or can be obtained in hard copy from DEST. The following points summarise the assessment requirements under the AQTF.

Registration of Training Organisations

Assessment must be conducted by, or on behalf of, an RTO formally registered by a State or Territory Registering/Course Accrediting Body in accordance with the Standards for Registered Training Organisations. The RTO must have the specific units of competency and/or AQF qualifications on its scope of registration. See Section 1 of the Standards for Registered Training Organisations.

Quality Training and Assessment

Each RTO must have systems in place to plan for and provide quality training and assessment across all its operations. See Standard 1 of the Standards for Registered Training Organisations.

Assessor Competency Requirements

Each person involved in training, assessment or client service must be competent for the functions they perform. See Standard 7 of the Standards for Registered Training Organisations for assessor competency requirements. Standard 7 also specifies the competencies that must be held by trainers.
Assessment Requirements

The RTO's assessments must meet the requirements of the endorsed components of Training Packages within its scope of registration. See Standard 8 of the Standards for Registered Training Organisations.

Assessment Strategies

Each RTO must identify, negotiate, plan and implement appropriate learning and assessment strategies to meet the needs of each of its clients. See Standard 9 of the Standards for Registered Training Organisations.

Mutual Recognition

Each RTO must recognise the AQF qualifications and Statements of Attainment issued by any other RTO. See Standard 5 of the Standards for Registered Training Organisations.

Access and Equity and Client Services

Each RTO must apply access and equity principles, provide timely and appropriate information, advice and support services that assist clients to identify and achieve desired outcomes. This may include reasonable adjustment in assessment. See Standard 6 of the Standards for Registered Training Organisations.

Partnership Arrangements

RTOs must have, and comply with, written agreements with each organisation providing training and/or assessment on its behalf. See Standard 1.6 of Standards for Registered Training Organisations.

Recording Assessment Outcomes

Each RTO must have effective administration and records management procedures in place, and must record AQF qualifications and Statements of Attainment issued. See Standards 4 and 10.2 of the Standards for Registered Training.

Issuing AQF Qualifications and Statement of Attainment

Each RTO must issue AQF qualifications and Statements of Attainment that meet the requirements of the AQF Implementation Handbook and the endorsed Training Packages within the scope of its registration. An AQF qualification is issued once the full requirements for a qualification, as specified in the nationally endorsed Training Package are met. A Statement of Attainment is issued where the individual is assessed as competent against fewer units of competency than required for an AQF qualification. See Standard 10 and Section 2 of the Standards for Registered Training Organisations.
Licensing

Licensing/Registration Requirements

The regulatory authorities in each State and Territory determine licensing requirements for the mining industry. To meet the requirements under any statutory regulations, State/Territory licensing requirements need to be confirmed by the employer and the RTO delivering and/or assessing the competency.

Licensing requirements in the mining industry may cover such areas as:

- shotfiring
- working in confined spaces
- dozer
- front end loader
- excavator
- dogging
- rigging
- forklift truck
- crane operator.

Pathways

The competencies in this Training Package may be attained in a number of ways including through:

- formal or informal education and training
- experiences in the workplace
- general life experience, and/or
- any combination of the above.

Assessment under this Training Package leading to an AQF qualification or Statement of Attainment may follow a learning and assessment pathway, an assessment-only or recognition pathway, or a combination of the two as illustrated in the following diagram.
Each of these assessment pathways leads to full recognition of competencies held - the critical issue is that the candidate is competent, not how the competency was acquired.

Assessment, by any pathway, must comply with the assessment requirements set out in the Standards for Registered Training Organisations.

**Learning and Assessment Pathways**

Usually, learning and assessment are integrated, with assessment evidence being collected and feedback provided to the candidate at anytime throughout the learning and assessment process. Learning and assessment pathways may include structured programs in a variety of contexts using a range of strategies to meet different learner needs. Structured learning and assessment programs could be: group-based, work-based, project-based, self-paced, action learning-based; conducted by distance or e-learning; and/or involve practice and experience in the workplace.

Learning and assessment pathways to suit New Apprenticeships have a mix of formal structured training and structured workplace experience with formative assessment activities through which candidates can acquire and demonstrate skills and knowledge from the relevant units of competency.

**Assessment-Only or Recognition of Prior Learning Pathway**

Competencies already held by individuals can be formally assessed against the units of competency in this Training Package, and should be recognised regardless of how, when or where they were achieved.

In an assessment-only or Recognition of Prior Learning (RPL) pathway, the candidate provides current, quality evidence of their competency against the relevant unit of competency. This process may be directed by the candidate and verified by the assessor, such as in the compilation of portfolios; or directed by the assessor, such as through observation of workplace performance and skills application, and oral and/or written assessment. Where the outcomes of this process indicate that the candidate is competent, structured training is not required. The RPL requirements of Standard 8.2 of the Standards for Registered Training Organisations must be met.

As with all assessment, the assessor must be confident that the evidence indicates that the candidate is currently competent against the endorsed unit of competency. This evidence may take a variety of forms and might include certification, references from past employers, testimonials from clients, and work samples. The onus is on candidates to provide sufficient evidence to satisfy assessors that they currently hold the relevant competencies. In judging evidence, the assessor must ensure that the evidence of prior learning is:

- authentic (the candidate's own work)
- valid (directly related to the current version of the relevant endorsed unit of competency)
- reliable (shows that the candidate consistently meets the endorsed unit of competency)
- current (reflects the candidate's current capacity to perform the aspect of the work covered by the endorsed unit of competency), and
- sufficient (covers the full range of elements in the relevant unit of competency and addresses the four dimensions of competency, namely task skills, task management skills, contingency management skills, and job/role environment skills).
The assessment only or recognition of prior learning pathway is likely to be most appropriate in the following scenarios:

- candidates enrolling in qualifications who want recognition for prior learning or current competencies
- existing workers
- individuals with overseas qualifications
- recent migrants with established work histories
- people returning to the workplace, and
- people with disabilities or injuries requiring a change in career.

Combination of Pathways

Where candidates for assessment have gained competencies through work and life experience and gaps in their competence are identified, or where they require training in new areas, a combination of pathways may be appropriate.

In such situations, the candidate may undertake an initial assessment to determine their current competency. Once current competency is identified, a structured learning and assessment program ensures that the candidate acquires the required additional competencies identified as gaps.

Assessor Requirements

This section identifies the mandatory competencies for assessors, and clarifies how others may contribute to the assessment process where one person alone does not hold all the required competencies.

Assessor Competencies

The Standards for Registered Training Organisations specify mandatory competency requirements for assessors. For information, Standard 7.3 from the Standards for Registered Training Organisations follows:

7.3 a The RTO must ensure that assessments are conducted by a person who

has:

i  the following competencies* from the Training Package for
   Assessment and Workplace Training, or demonstrated equivalent
   competencies:
   a  TAAASS401A Plan and organise assessment;
   b  TAAASS402A Assess competence;
   c  TAAASS404A Participate in assessment validation;

ii relevant vocational competencies, at least to the level being assessed.

b However, if a person does not have all the competencies in Standards 7.3 a
(i) and vocational competencies defined in Standards 7.3 a (ii), one person
with the competencies listed in Standards 7.3 a (i), and one or more
persons who have the competencies listed in Standards 7.3 a (ii) may
work together to conduct assessments.

* A person who holds the competencies BSZ401A Plan assessment, BSZ402A Conduct assessment, and BSZ403A Review assessment from
the Training Package for Assessment and Workplace Training will be accepted for the purposes of this standard. A person who has
demonstrated equivalent competencies to BSZ401A and BSZ402A and BSZ403A in the period up to 12 months following publication of the
Training and Assessment Training Package will also be accepted for the purposes of this standard.

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**Industry Assessment Contextualisation 1**

**Assessment in the Coal Mining Industry**

All assessors who hold a BSZ Certificate IV in Assessment and Workplace Training or the assessor units
BSZ401 Plan assessment, BSZ402 Conduct assessment, BSZ403 Review assessment fulfil the
requirements for the assessor competencies to conduct assessment unless they are assessing the
qualifications or units of competency in the TAA04 Training and Assessment Training Package.

In the mining industry, assessment is often conducted for quality and statutory compliance. However,
assessment for national qualifications and/or Statements of Attainment under the AQF must be conducted
by or under the auspices of a RTO. Assessment for national recognition purposes must meet the
requirements of the Australian Quality Training Framework (AQTF). Assessment must be conducted by
an RTO formally registered under Australian Quality Training Framework Standards for Registered
Training Organisations and with the specific competency standards or Training Package within its scope
of registration.

**Partnership Arrangements**

Under the AQTF, RTOs may enter into partnerships with non-registered organisations, such as schools,
industry organisations and enterprises, for delivery and assessment within the RTOs scope of registration.

Where this is done, the RTO must have a formal agreement with the organisation that provides the
training and/or assessment under its name. The agreement must specify how all parties will discharge
their responsibilities for ensuring the quality of the training and/or assessment conducted on its behalf,
including the qualification requirements for delivery and assessment.

The RTO has full responsibility for the quality and outcomes of any training or assessment conducted on
its behalf, and it must maintain a register of all such agreements.

The following case studies provide examples of partnership arrangements mines have formed with RTOs.

**Case Study 1. Partnership to Deliver Training and Assessment**

* A mine site has developed a partnership arrangement with an RTO where the RTO will provide off-the-job training
  and assessment and the mine will provide on-the-job training and workplace evidence that support an employee's
  achievement of a unit of competency.

The RTO trainer/assessor and the mine trainer identify the required units of competency and agree on the
assessment tools to be used both on-and off-the-job.
The RTO provides classroom based training and assessment that ensures the employee has the required underpinning knowledge for specified units of competency. The mine provides on-the-job training and the workplace supervisor/coach or trainer assist the employees to gather the required evidence to support their achievement of the units of competency. This evidence includes pre-operational check sheets, inspection checklists, safety device testing and operational production reporting documentation for individual operators. The RTO assessor uses the workplace evidence in conjunction with the off-the-job assessments to determine the operator’s competence for the achievement of a Statement of Attainment or a qualification.

Case Study 2. Partnership for Assessment Only

A mine site has entered into a partnership arrangement with an RTO for the RTO to provide an on-the-job assessment only service using qualified assessors. All training is provided on-the-job by the mine.

The mine trainer and the RTO agree on the training outcomes required to achieve the units of competency and the assessment tools to be used. The RTO also provides the mine trainer with the RTO assessors’ CVs and gains agreement as to their suitability for on-the-job assessment.

When the employees have completed their on-site training the RTO is informed and a suitable time arranged for the assessments. The RTO assessor conducts the assessments using the agreed assessment tools as well as ensuring safe workplace and assessment conditions, complying with permit/access and ensuring minimal interruption to mine operations. The RTO awards Statements of Attainment and/or qualifications to the successful employees.

Case Study 3. Partnership for All on the Job Training and Assessment by the Mine

A mine has entered into a partnership agreement with an RTO for the RTO to recognise the mine assessments and issue successful employees with Statements of Attainment or qualifications. The agreement, between the mine and the RTO clearly sets out the roles and responsibilities of both parties. In particular the mine will use qualified assessors and the RTO will monitor the assessment process and outcomes, a requirement under the AQTF. The communication arrangements between the parties is also documented.

The RTO worked with mine personnel to document the assessment process, the range of evidence to be collected and record keeping requirements and to confirm the assessor qualifications. A procedure for validating the assessment strategies and tools was agreed and documented. The RTO visited the mine and validated the assessment process, strategies and tools and recommended any action for improvement.

The mine completed all training and assessments using the agreed assessment strategies and tools and informed the RTO of the outcomes. The RTO awarded the Statements of Attainment or qualification to successful applicants. Under the AQTF the RTO annually conducts an audit of the assessment process and tools to ensure validity, reliability, fairness and flexibility and recommends any action to improve consistency.

Designing Assessment Tools

This section provides an overview on the use and development of assessment tools.

Use of Assessment Tools

Assessment tools provide a means of collecting the evidence that assessors use in making judgements about whether candidates have achieved competency.

There is no set format or process for the design, production or development of assessment tools. Assessors may use prepared assessment tools, such as those specifically developed to support this Training Package, or they may develop their own.
Using Prepared Assessment Tools

If using prepared assessment tools, assessors should ensure these are benchmarked, or mapped, against the current version of the relevant unit of competency. This can be done by checking that the materials are listed on the National Training Information Service (http://www.ntis.gov.au). Materials on the list have been noted by the National Quality Council as meeting their quality criteria for Training Package support materials.

Developing Assessment Tools

When developing assessment tools, assessors must ensure that they:

- are benchmarked against the relevant unit or units of competency
- are reviewed as part of the validation of assessment strategies as required under 9.2 (i) of the Standards for Registered Training Organisations
- meet the assessment requirements expressed in the Standards for Registered Training Organisations, particularly Standards 8 and 9.

A key reference for assessors developing assessment tools is TAA04 Training and Assessment Training Package and the unit of competency TAAASS403A Develop assessment tools. There is no set format or process for the design, production or development of assessment materials.

Conducting Assessment

This section details the mandatory assessment requirements and provides information on equity in assessment including reasonable adjustment.

Mandatory Assessment Requirements

Assessments must meet the criteria set out in Standard 8 from the Standards for Registered Training Organisations. For information, Standard 8 from the Standards for Registered Training Organisations is reproduced below.
8 RTO Assessments

The RTO's assessments meet the requirements of the endorsed components of Training Packages and the outcomes specified in accredited courses within the scope of its registration.

8.1 The RTO must ensure that assessments (including RPL):

i. comply with the assessment guidelines included in the applicable nationally endorsed Training Packages or the assessment requirements specified in accredited courses;

ii. lead to the issuing of a statement of attainment or qualification under the AQF when a person is assessed as competent against nationally endorsed unit(s) of competency in the applicable Training Package or modules specified in the applicable accredited course;

iii. are valid, reliable, fair and flexible;

iv. provide for applicants to be informed of the context and purpose of the assessment and the assessment process;

v. where relevant, focus on the application of knowledge and skill to the standard of performance required in the workplace and cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills;

vi. involve the evaluation of sufficient evidence to enable judgements to be made about whether competency has been attained;

vii. provide for feedback to the applicant about the outcomes of the assessment process and guidance on future options;

viii. are equitable for all persons, taking account of individual needs relevant to assessment; and

ix. provide for reassessment on appeal.

8.2a a The RTO must ensure that RPL is offered to all applicants on enrolment

b The RTO must have an RPL process that:

i. is structured to minimise the time and cost to applicants; and

ii. provides adequate information, support and opportunities for participants to engage in the RPL process.
Delivery and assessment of Employability Skills

Employability Skills are integral to workplace competency and, as such, must be considered in the design, customisation, delivery and assessment of vocational education and training programs in an integrated and holistic way, as represented diagrammatically below.

Training providers must analyse the Employability Skills information contained in units of competency in order to design valid and reliable learning and assessment strategies. This analysis includes:

- reviewing unit(s) of competency to determine how each relevant Employability Skill is found and applied within the unit
- analysing the Employability Skills Summary for the qualification in which the unit(s) is/are packaged to help clarify relevant industry/workplace contexts with regard to the application of Employability Skills at that qualification level
- designing learning and assessment activities that address the Employability Skills requirements.
Employability Skills in context

Employability Skills in the Coal Mining Training Package

Trainers and assessors should identify and capture the key aspects or facets of the Employability Skills that are important to the job roles. These important industry applications of Employability Skills should be included in learning and assessment strategies.

The following is information for trainers and assessors about Employability Skills in the Coal Mining Training Package.

- Identify examples of how each Employability Skills is applicable to the job roles covered by the unit of competency/qualification.
- Identify the industry context of the Employability Skills which can be explained as measurable outcomes of performance in the individual unit of competency or the units of competency in each qualification.
- The detail in each Employability Skills will vary depending on the range of job roles covered by the unit of competency/qualification in question.

The identified Employability Skills could contain information that may also assist in building learners’ understanding of industry and workplace expectations.

For more information on Employability Skills in the Resources and Infrastructure (RIISC) Training Packages go to the SkillsDMC website at www.skillsdmc.com.au

Access and Equity

An individual's access to the assessment process should not be adversely affected by restrictions placed on the location or context of assessment beyond the requirements specified in this Training Package.

Reasonable adjustments can be made to ensure equity in assessment for people with disabilities. Adjustments include any changes to the assessment process or context that meet the individual needs of the person with a disability, but do not change competency outcomes. Such adjustments are considered 'reasonable' if they do not impose an unjustifiable hardship on a training provider or employer. When assessing people with disabilities, assessors are encouraged to apply good practice assessment methods with sensitivity and flexibility.
Industry Assessment Contextualisation 2

Conduct of Assessment

This Training Package provides a range of options for meeting the assessor requirements. Assessments in the coal mining industry can be undertaken in a variety of workplace and institutional contexts by individual assessors, partnerships involving assessors and technical experts, and teams of assessors.

All training organisations, including RTOs, must consult with responsible mine personnel to determine the appropriateness of the assessor for on-the-job assessments at a mine site.

Specific criteria may exist for assessors who are assessing an employee/candidate for a qualification which is a requirement for the issue of a statutory licence to practice, eg Shotfirer. The RTO must clarify the specific criteria required as this requirement may vary between States and/or Territories depending on legislative requirements.

The case studies provided show how the requirement to use qualified assessors can be met.

Case Study 4. An individual assessor conducts the assessment

A mining company has entered into an agreement with a RTO for the RTO to conduct workplace assessments for employees to gain national qualifications. The mining company has agreed to use the RTO assessor who satisfies the Training Package requirements and guidelines for the relevant assessor competencies.

The RTO assessor was formally a mine operator with some 15 years experience in the industry. The RTO assessor has been assessed and gained Statements of Attainment in the units of competency that they will be assessing.

The assessor conducts the workplace assessments under the national AQTF principles, Training Package requirements and RTO policies, procedures and practices. As well, the RTO assessor meets mine site requirements for ensuring a safe workplace and assessment conditions, complying with permit/access and ensuring minimal interruption to mine operations.

Case Study 5. An Assessor Works with a Technical Expert to Conduct the Assessment

A mining company has its own internal training systems. For quality reasons the company maintains a small group of highly experienced mine operators who are operator/trainers, who have been nominated by the mine manager, and who have undertaken internal training and on-the-job competency assessment, using the company resources, for several years.

The RTO assessor satisfies the Training Package requirements and guidelines for the relevant assessor competencies. However the assessor does not posses the operational competencies or technical knowledge of mining operations.

Together the RTO assessor and the company operator/trainers undertake a review of the company assessments and modify the materials and process to meet the national competency requirements. They then ‘trial’ the new assessments with operator/trainers. During the trial they provide the company operators/trainers with Statements of Attainment and/or qualifications for the units of competency which they will be assessing as a technical expert with the RTO.

After the ‘trial’ the RTO assessor and the mining company technical expert (operator/trainer) facilitate on-the-job assessments to meet the company, individual operator and competency/Training Package requirements.

Agreed assessment practices include a requirement that the company technical experts only assess operators who are not on their roster and who have been trained by other operator/trainers.
Case Study 6. An Assessor Works with the Workplace Supervisor in Collecting Evidence for Valid Assessments

A mining company developed a partnership arrangement with an RTO that includes the workplace supervisor assisting in agreed assessment and reporting practices. A workplace supervisor/team leader from the trainee's roster is required to assist in providing anecdotal and job record evidence of satisfactory performance over a period of time as evidence that will contribute towards the assessment outcomes. The workplace supervisors/team leaders do not hold national assessor competencies in operations but are deemed competent by the RTO. The RTO is also negotiating with the mining company for workplace supervisor/team leader to gain the relevant assessment units of competency.

The workplace supervisor/team leader is able to provide recent evidence of competence, including pre-operational checks, inspection checklists, safety device testing and operational production reporting documentation for individual operators. The workplace supervisor/team leader is able to provide oral evidence against the competency requirements of communication and problem solving.

This evidence informs the overall assessment and eliminates, in some instances, the necessity for an operator to repeat, by demonstration, competency assessment tasks.

Case Study 7. A Team Assessment

The Training Department in a mining enterprise mapped the enterprise specific work activities and outcomes for team leaders against the national competency standards for the Certificate IV coal mining qualification. An evidence guide was developed directly linked to workplace performance. This evidence guide specified workplace documentation and site specific activities that could be used as evidence in a portfolio for assessment.

An assessment guide and a mentor (usually a one up manager) are provided to assist a team leader prepare for assessment. Working through the assessment guide the team leader identifies sufficient existing evidence and implements site improvements where required. When sufficient evidence has been established for one or more workplace activities the Team Leader requests an assessment.

The assessment is undertaken by a qualified assessor, who satisfies the Training Package requirements and guidelines for the relevant assessor competencies, and a senior specialist manager. Evidence for the assessment is drawn from a range of sources, including the portfolio of evidence and the team leader's team members. If the assessment identifies some areas where further training or development activities should occur an action plan is drawn up which is agreed to by the team leader and their manager.

Subsequent assessments, and re-assessments if necessary, cover the units of competency required for a Certificate IV. A final review of all completed assessments is conducted by a senior management team and the national training adviser before a qualification is issued.

This process requires the candidate for assessment to be actually working on a site and challenges the notion of people learning in a classroom. The assessment process can be resource intensive and some managers are challenged by the need for demonstrated continuous improvement in site performance and providing greater autonomy to supervisors/team leaders.

The enterprise has found advantages in that linking the training and assessment to the work site drives continuous improvement in site performance. The manager is engaged as a stakeholder and the action plans ensure that required training and mentoring actually happens.

Case Study 8. An RPL Process

A mining company, registered as an RTO, wished to use RPL/RCC to recognise employee knowledge and skills against the national competency standards. Many of the employees had been employed at other mines where they had gained licences and participated in training programs and so felt that they need not participate in any further assessment. The mining company put in place a structured process...
Assessment Guidelines

for RPL/RCC, which met the Training Package requirements. The steps in the process included:

Step 1: Assisting the employee to gather all existing documentation of skills

Mining company assessors discussed the process with the employees and identified the units of competency/qualifications they wished to gain. The employees were encouraged to gather all relevant documentation from previous work roles, training and assessment and recognition of current skills that related to the selected units of competency. This included such documents as a CV, any relevant work history, results of previous training, work duties, copies of licences gained, Tool Boxes etc.

This documentation provided the assessor with an excellent snapshot of the competencies the employee should be able to gain.

Step 2: Ensuring the desired competencies are current

The assessor explained to the employees that each mine has different standards and ways of recording training outcomes. Some of the training recognition and licences were more than 5 years old. To ensure their current employer maintained their Duty of Care and the mine standards there was a need for a formal process to ensure the competencies sought were current, that there was sufficient evidence and that the knowledge and skills met the requirements of the national units of competency and qualifications. Although there was some negativity towards having to be re-assessed in some circumstances, the employees agreed when their work history was to be used as part of the evidence for the assessment.

It was found that the assessment process although rigorous was very quick as the assessor had the work history, recent in-house training outcomes, supervisor comments and workplace records to form part of the evidence.

Step 3: Formalising the outcomes

Many employees were surprised and pleased with the assessment outcomes. Others found that as they had not used the skill for sometime they were a little rusty and required some update training. The employer provided the training as part of the agreed arrangement.

Employees were awarded Statements of Attainment or qualifications against the national Training Package and were proud of their recognition.

Step 4: Formalising the RPL/RCC process in the work processes

The RPL/RCC activity opened up communication lines and ensured greater consultation with individuals and groups. When looking to gain RPL/RCC it was easy to look at the occupational health and safety issues as well as technical knowledge and skills. The whole RPL/RCC and assessment process became blended into work processes rather than looking at it as a separate event which disrupted the work routine.

The mining company has found that there has been a change in the culture in the workplace and productivity has improved.

Ways of Minimising the Cost of the Assessment Process

Assessors should, where possible, find ways to minimise the cost and inconvenience caused by assessment activities. For example:

- check candidate’s readiness for assessment before proceeding
- use performance of actual work activities as sources of evidence
- arrange for demonstrations of competence in the most appropriate place
- make the assessment only as precise and/or complex as necessary at the candidate’s level of qualification and occupational area
- separate evidence gathering from judgement, and assign evidence gathering to less
expensive personnel (including candidates themselves)

- design assessment events so that the candidate can have prior knowledge of the requirements and can be actively involved in evidence gathering
- use holistic assessment scenarios which build on secondary evidence such as a record book, trainer’s report or workplace report
- limit the number of times a single competency or similar competencies are assessed
- monitor progress as part of normal responsibilities, rather than relying on assessment events
- provide self appraisal tools for candidates
- assess more than one competency at a time.

Further Sources of Information

The section provides a listing of useful contacts and resources to assist assessors in planning, designing, conducting and reviewing of assessments against this Training Package.

Contacts:

SkillsDMC
Level 7, 36 Carrington Street, Sydney
Telephone: (02) 92993014
Fax: (02) 92993015
Email: skillsdmc@skillsdmc.com.au
Website: www.skillsdmc.com.au

SkillsDMC NSW
Level 7, 36 Carrington Street, Sydney
Telephone: (02) 92993014
Fax: (02) 92993015
Email: drao@skillsdmc.com.au

SkillDMC WA
Level 29 Forrest Centre, 221 St Georges terrace, Perth WA 3438
Telephone: (08) 94803722
Fax: (08)9481 3177
Email: leejackson@skillsdmc.com.au
General Resources

Refer to http://antapubs.dest.gov.au/publications/search.asp to locate the following ANTA publications.


Australian Quality Training Framework (AQTF) - for general information go to: www.dest.gov.au/sectors

Australian Quality Training Framework (AQTF) - for resources and information go to: www.dest.gov.au

Australian Quality Training Framework Standards for Registered Training Organisations, Australian National Training Authority, Melbourne, 2005. Available in hard copy from State or Territory Training Authorities or can be downloaded from www.dest.gov.au

TAA04 Training and Assessment Training Package. This is available from the Innovation and Business Skills Australia (IBSA) and can be viewed, and components downloaded, from the National Training Information Service (NTIS).

National Training Information Service, and electronic database providing comprehensive information about RTOs, Training Packages and accredited courses – www.ntis.gov.au

Assessment Resources


Printed and/or CD ROM versions of the Guides can be purchased from Australian Training Products (ATP). The resource includes the following guides:

1. Training Package Assessment Materials Kit
2. Assessing Competencies in Higher Qualifications
3. Recognition Resource
4. Kit to Support Assessor Training
5. Candidate's Kit: Guide to Assessment in New Apprenticeships
6. Assessment Approaches for Small Workplaces
7. Assessment Using Partnership Arrangements
8. Strategies for ensuring Consistency in Assessment
9. Networking for Assessors
10. Quality Assurance Guide for Assessment

An additional guide "Delivery and Assessment Strategies" has been developed to complement these resources.

Assessment Tool Design and Conducting Assessment

VETASSESS & Western Australian Department of Training and Employment 2000, *Designing Tests - Guidelines for designing knowledge based tests for Training Packages.*

Vocational Education and Assessment Centre 1997, Designing Workplace Assessment Tools, *A self-directed learning program,* NSW TAFE.


Assessor Training


**Assessment System Design and Management**


Competency Standards

What is competency?

The broad concept of industry competency concerns the ability to perform particular tasks and duties to the standard of performance expected in the workplace. Competency requires the application of specified skills, knowledge and attitudes relevant to effective participation in an industry, industry sector or enterprise.

Competency covers all aspects of workplace performance and involves performing individual tasks; managing a range of different tasks; responding to contingencies or breakdowns; and, dealing with the responsibilities of the workplace, including working with others. Workplace competency requires the ability to apply relevant skills, knowledge and attitudes consistently over time and in the required workplace situations and environments. In line with this concept of competency Training Packages focus on what is expected of a competent individual in the workplace as an outcome of learning, rather than focussing on the learning process itself.

Competency standards in Training Packages are determined by industry to meet identified industry skill needs. Competency standards are made up of a number of units of competency each of which describes a key function or role in a particular job function or occupation. Each unit of competency within a Training Package is linked to one or more AQF qualifications.

Contextualisation of Units of Competency by RTOs

Registered Training Organisation (RTOs) may contextualise units of competency to reflect local outcomes required. Contextualisation could involve additions or amendments to the unit of competency to suit particular delivery methods, learner profiles, specific enterprise equipment requirements, or to otherwise meet local needs. However, the integrity of the overall intended outcome of the unit of competency must be maintained.

Any contextualisation of units of competency in this endorsed Training Package must be within the bounds of the following advice. In contextualising units of competency, RTOs:

- must not remove or add to the number and content of elements and performance criteria;
- may add specific industry terminology to performance criteria where this does not distort or narrow the competency outcomes;
- may make amendments and additions to the range statement as long as such changes do not diminish the breadth of application of the competency and reduce its portability, and/or; and
- may add detail to the evidence guide in areas such as the critical aspects of evidence or resources and infrastructure required where these expand the breadth of the competency but do not limit its use.
Components of Units of Competency

The components of units of competency are summarised below, in the order in which they appear in each unit of competency.

Unit Title

The unit title is a succinct statement of the outcome of the unit of competency. Each unit of competency title is unique, both within and across Training Packages.

Unit Descriptor

The unit descriptor broadly communicates the content of the unit of competency and the skill area it addresses. Where units of competency have been contextualised from units of competency from other endorsed Training Packages, summary information is provided. There may also be a brief second paragraph that describes its relationship with other units of competency, and any licensing requirements.

Application of the Unit

This sub-section fleshes out the unit of competency’s scope, purpose and operation in different contexts, for example, by showing how it applies in the workplace.

Elements of Competency

The elements of competency are the basic building blocks of the unit of competency. They describe in terms of outcomes the significant functions and tasks that make up the competency.

Performance Criteria

The performance criteria specify the required performance in relevant tasks, roles, skills and in the applied knowledge that enables competent performance. They are usually written in passive voice. Critical terms or phrases may be written in bold italics and then defined in range statement, in the order of their appearance in the performance criteria.

Required Skills and Knowledge

The essential skills and knowledge are either identified separately or combined. Knowledge identifies what a person needs to know to perform the work in an informed and effective manner. Skills describe the application of knowledge to situations where understanding is converted into a workplace outcome.

Range Statement

The range statement provides a context for the unit of competency, describing essential operating conditions that may be present with training and assessment, depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts. As applicable, the meanings of key terms used in the performance criteria will also be explained in the range statement.
Evidence Guide

The evidence guide is critical in assessment as it provides information to the Registered Training Organisation (RTO) and assessor about how the described competency may be demonstrated. The evidence guide does this by providing a range of evidence for the assessor to make determinations, and by providing the assessment context. The evidence guide describes:

- conditions under which competency must be assessed including variables such as the assessment environment or necessary equipment;
- relationships with the assessment of any other units of competency;
- suitable methodologies for conducting assessment including the potential for workplace simulation;
- resource implications, for example access to particular equipment, infrastructure or situations;
- how consistency in performance can be assessed over time, various contexts and with a range of evidence; and
- the required underpinning knowledge and skills

Employability Skills statement

A standard Employability Skills statement appears in each unit of competency. This statement directs trainers and assessors to consider the information contained in the Employability Skills Summary in which the unit of competency is packaged.

Employability Skills in units of competency

The detail and application of Employability Skills facets will vary according to the job-role requirements of each industry. In developing Training Packages, industry stakeholders are consulted to identify appropriate facets of Employability Skills which are incorporated into the relevant units of competency and qualifications.

Employability Skills are not a discrete requirement contained in units of competency (as was the case with Key Competencies). Employability Skills are specifically expressed in the context of the work outcomes described in units of competency and will appear in elements, performance criteria, range statements and evidence guides. As a result, users of Training Packages are required to review the entire unit of competency in order to accurately determine Employability Skills requirements.

How Employability Skills relate to the Key Competencies

The eight nationally agreed Employability Skills now replace the seven Key Competencies in Training Packages. Trainers and assessors who have used Training Packages prior to the introduction of Employability Skills may find the following comparison useful.
When analysing the above table it is important to consider the relationship and natural overlap of Employability Skills. For example, using technology may involve communication skills and combine the understanding of mathematical concepts.

**Explicitly embedding Employability Skills in units of competency**

This Training Package seeks to ensure that industry-endorsed Employability Skills are explicitly embedded in units of competency. The application of each skill and the level of detail included in each part of the unit will vary according to industry requirements and the nature of the unit of competency.

Employability Skills must be both explicit and embedded within units of competency. This means that Employability Skills will be:

- embedded in units of competency as part of the other performance requirements that make up the competency as a whole
- explicitly described within units of competency to enable Training Packages users to identify accurately the performance requirements of each unit with regards to Employability Skills.

This Training Package also seeks to ensure that Employability Skills are well-defined and written into units of competency so that they are apparent, clear and can be delivered and assessed as an essential component of unit work outcomes.

The following table contains examples of embedded Employability Skills for each component of a unit of competency. Please note that in the examples below the bracketed skills are provided only for clarification and will not be present in units of competency within this Training Package.

<table>
<thead>
<tr>
<th>Employability Skills</th>
<th>Mayer Key Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>Communicating ideas and information</td>
</tr>
<tr>
<td>Teamwork</td>
<td>Working with others and in teams</td>
</tr>
<tr>
<td>Problem solving</td>
<td>Solving problems</td>
</tr>
<tr>
<td></td>
<td>Using mathematical ideas and techniques</td>
</tr>
<tr>
<td>Initiative and enterprise</td>
<td></td>
</tr>
<tr>
<td>Planning and organising</td>
<td>Collecting, analysing and organising information</td>
</tr>
<tr>
<td></td>
<td>Planning and organising activities</td>
</tr>
<tr>
<td>Self-management</td>
<td></td>
</tr>
<tr>
<td>Learning</td>
<td></td>
</tr>
<tr>
<td>Technology</td>
<td>Using technology</td>
</tr>
<tr>
<td>Unit component</td>
<td>Example of embedded Employability Skill</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td><strong>Unit title</strong></td>
<td>Give formal presentations and take part in meetings (communication)</td>
</tr>
<tr>
<td><strong>Unit descriptor</strong></td>
<td>This unit covers the skills and knowledge required to promote the use and implementation of innovative work practices to effect change. (initiative and enterprise)</td>
</tr>
<tr>
<td><strong>Element</strong></td>
<td>Proactively resolve issues. (problem solving)</td>
</tr>
<tr>
<td><strong>Performance criteria</strong></td>
<td>Information is organised in a format suitable for analysis and dissemination in accordance with organisational requirements (planning and organising)</td>
</tr>
<tr>
<td><strong>Range statement</strong></td>
<td>Software applications may include email, internet, word processing, spreadsheet, database or accounting packages (technology)</td>
</tr>
</tbody>
</table>
| **Required skills and knowledge** | Modify activities depending on differing workplace contexts, risk situations and environments (learning)  
Work collaboratively with others during a fire emergency (teamwork)  
Instructions, procedures and other information relevant the maintenance of vessel and port security (communication) |
| **Evidence guide**  | Evidence of having worked constructively with a wide range of community groups and stakeholders to solve problems and adapt or design new solutions to meet identified needs in crime prevention. In particular, evidence must be obtained on the ability to:  
- assess response options to identified crime-prevention needs and determine the optimal action to be implemented  
- in consultation with relevant others, design an initiative to address identified issues (initiative and enterprise) |
Customisation/Contextualisation Guidelines

Unit Contextualisation/Customisation

In any contextualisation of the units of competency in the Coal Training Package, three broad principles should be followed.

- industry wide skill requirements should be adequately addressed
- industry portability requirements should still be adequately addressed
- the integrity of the unit of competency, assessment requirements and AQF outcomes must be maintained.

The units of competency have been developed so that they are flexible enough to apply to all types of coal enterprises. Where this was not possible, particular units of competency were developed to address the needs of specific situations, eg dredging. It should therefore be possible to apply units of competency within particular enterprises without difficulty.

The units of competency are generic enough to apply to both small and large enterprises. The statement "according to legislative, organisational and site requirements" allows wide contextualisation. Units of competency can therefore provide a guide that can be taken and tailored to meet the needs of specific enterprises.

Most importantly, the units of competency are designed to allow training to be tailored and contextualised to meet the needs of particular enterprises. Contextualisation is a simple process. The aim is to add specific enterprise information to the units of competency to reflect the work of the particular workplace.

The following principles apply to contextualisation:

- Unit titles and codes should not be changed.
- The Elements and Performance Criteria should not be changed. The integrity of the coal units of competency must be maintained by the adoption of all elements within the units.
- Additions can be made to the Range Statement as the units have application in a range of contexts. The Range Statement in the units is extensive but not exhaustive. Should certain circumstances not be listed, the user may add these.
- The Evidence Guide may be altered to allow for the inclusion of the state/territory legislative requirements and enterprise procedures and appropriate changes to the required knowledge and skills for the purpose of assessment.
- When customising the units of competency, the Registered Training Organisation or enterprise must ensure that any unit generated must, as a minimum, be comparable to a unit achieved against the industry units of competency.
Contextualisation involves no major changes to the units of competency. Enterprise-specific information is merely added to the national units of competency in the Range Statement or the Evidence Guide without taking anything away. This maintains the integrity of the national units of competency, while ensuring the customised units are equivalent to the national units of competency.

**Qualification Customisation within and outside the Training Package**

The purpose of customisation of qualifications is to provide training, which is tailored to the needs of specific workplaces. The opportunity for customisation of coal qualifications has been provided through mandatory and electives units of competency in each qualification. The mandatory units provide national consistency in core knowledge and skills. The elective units of competency provide the flexibility required by different enterprises and/or training situations. Each qualification has a wide range of electives, which allow a choice to meet specific work requirements.

Most qualifications also provide the option to select a small number of elective units, relevant to the job function, from elsewhere in the Coal Training Package or other endorsed Training Packages. This allows for the situation where a candidate's range of work functions includes the mandatory and core functions in the Coal Industry but also includes specialist functions performed in other industries, but not included in this Training Package. In each qualification the requirements for the selection of units from other endorsed Training Packages is specified.

Any customisation of coal qualifications must ensure quality outcomes and preserve the integrity of the qualification. To do this the following principles should be followed:

- Mandatory units of competency must not be replaced or substituted.
- Units of competency selected from other endorsed Training Packages must be relevant to the job function.
- AQF requirements for the qualification are satisfied.
- The selection of units of competency must complete the entire requirements for mandatory and elective units as specified in the requirements for the qualification.
- When customised units of competency have been included, a Registered Training Organisation or enterprise must ensure that any qualification generated must, as a minimum, be equivalent to a qualification achieved against the industry units of competency.
- The elective units selected must not restrict the candidate's access to further education or employment opportunities within the industry.
- Training modules may not be substituted for endorsed units of competency.

There is no restriction on the use by other industries and enterprises of individual units of competency, either mandatory or elective, in the endorsed standards covered by this Training Package.
Consultation Process for the Coal Industry

The process for the review of the Coal Training Package units of competency and the revision and/or development of new units involved consultation with stakeholders in Queensland, New South Wales, Victoria, South Australia and Western Australia. The stakeholders involved in the consultation represented:

- industry representatives from all levels within coal mines
- industry technical experts
- union representatives
- industry associations, including the National and State Minerals Councils
- contractors
- equipment suppliers
- RTOs
- regulatory authorities.

Focus groups and workshops were convened to discuss the issues and comment on the existing and revised competency standards. This consultation was facilitated by the State and Territory Mining ITAB Network and supported by operative and management level within coal enterprises.

Representatives from all the stakeholder groups in all States and Territories participated in the validation of the competency standards.

Unit Structure and Coding in the Coal Units of Competency

The competency standards for the Coal Training Package conform to the ANTA template and the guidelines in the Training Package Development Handbook. The industry recommendations which have been incorporated in all units of competency include:

- using plain English
- writing the performance criteria in active voice
- highlighting the linkages between the Range Statement and the Performance Criteria to more accurately reflect the contexts in which the unit of competency can be achieved. This is done by italicising the word in the Performance Criteria if it appears in the Range Statement.
- ensuring linkages between the critical aspects of evidence, required knowledge and skills and the performance criteria
- ensuring there is integration of the key competencies in the performance criteria. This has been achieved by providing an example from the performance criteria which demonstrates each key competency.
- ensuring the requirements for literacy and numeracy are explicit in the units of competency.
Each nationally endorsed coal unit of competency has been allocated an alphanumeric code that includes:

- a three digit industry code (MNC)
- a one digit functional sector code (G, O, P or U)
- a four digit number
- a one digit version identifier.

The revised units of competency are grouped into four major areas as shown in the following table. A complete list of Coal units of competency is in Appendix 2.

<table>
<thead>
<tr>
<th>Field Code</th>
<th>Functional Sector</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCG</td>
<td>General units of competency applicable to more than one Functional area</td>
<td>Operator level and management level</td>
</tr>
<tr>
<td>MNCO</td>
<td>Surface Mining/Open Cut units of competency</td>
<td>Operator level and management level</td>
</tr>
<tr>
<td>MNCP</td>
<td>Coal Preparation units of competency</td>
<td>Operator level</td>
</tr>
<tr>
<td>MNCU</td>
<td>Underground units of competency</td>
<td>Operator level and management level</td>
</tr>
</tbody>
</table>

Coal Industry Units of Competency

A complete list of all Coal units of competency is in Appendix 2. Appendix 3 lists all the Coal Training Package (MNQ04) units of competency and shows any changes from the units of competency in the Coal Training Package (MNC98). This table lists the new and old codes and titles and details the changes that have been made and any new units of competency added.

To provide consistency with other Mining Training Packages the terms 'Apply', 'Implement' and 'Establish' have been used in the revision of the coal management units of competency. The outcomes of 'Establish' units involve the establishment of specific system frameworks and process for the implementation of the system. The outcomes of 'Implement' units involve the development of site specific procedures for the implementation of specific systems. The outcomes of 'Apply' units focus on the applying and monitoring of the site procedures and reporting outcomes.

Customisation of Coal Competency Standards

In any customisation of the units of competency in the Coal Training Package, three broad principles should be followed.

- Industry wide skill requirements should be adequately addressed.
- Industry portability requirements should still be adequately addressed.
- The integrity of the unit of competency, assessment requirements and AQF outcomes must be maintained.
The units of competency have been developed so that they are flexible enough to apply to all types of coal enterprises, including both black and brown coal and surface and underground mines. Where this was not possible, particular units of competency were developed to address the needs of specific situations, eg surface or underground. It should therefore be possible to apply units of competency within particular enterprises without difficulty.

The units of competency are general enough to apply to both small and large enterprises. Statements such as "in accordance with legislative and site requirements" allow for wide customisation. Units of competency can therefore provide a guide that can be taken and tailored to meet the needs of specific enterprises.

Most importantly, the units of competency are designed to allow training to be tailored and contextualised to meet the needs of particular enterprises. Customisation is a simple process. The aim is to add specific enterprise information to the units of competency to reflect the work of the particular workplace.

The following principles apply to customisation:

- Unit titles should not be changed.
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- Additions can be made to the Range Statement as the units have application in a range of contexts. The Range Statement statements in the units are extensive but not exhaustive. Should certain circumstances not be listed, the user may add these.
- The Evidence Guide may be altered to allow for the inclusion of the State/Territory legislative requirements and the enterprise's procedures for the purpose of assessment and changes to the underpinning knowledge and skills.
- When customising the units of competency, an RTO or enterprise must ensure that any qualification generated must, as a minimum, be comparable to a qualification achieved against the coal industry units of competency.

Customisation involves no major changes to the units of competency, enterprise specific information is merely added to the national units of competency in the Range Statement or the Evidence Guide without taking anything away. By doing this, the integrity of the national units of competency is maintained and the customised units are equivalent to the national units of competency.

**Future Review and Maintenance**

Any future review of the Coal Training Package undertaken by the Resources and Infrastructure ISC will encompass:

- the technical quality of the units of competency to address any improvements suggested by DEST
- industry acceptance, usage and feedback
- possible existence of any bias perceived in the units of competency
- the reliability of the competency standards as benchmarks for assessment
- the alignment with the Australian Qualifications framework when packaged into qualifications
- overlap with competency standards developed by other competency standards bodies.
Within the Coal Training Package, some units of competency, developed by other competency standards bodies have been imported into this Training Package, eg Business Services units of competency. As part of the Quality Assurance process related to competency standards, the Resources and Infrastructure ISC undertakes to liaise with the relevant competency standards bodies on an annual basis and will make adjustments as necessary.
## Units Imported From Other Training Packages

### Units imported from the Metalliferous Mining Training Package (MNM05)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNMULH204A</td>
<td>Conduct skip operations</td>
</tr>
<tr>
<td>MNMULH205A</td>
<td>Operate automated winder</td>
</tr>
<tr>
<td>MNMULH306A</td>
<td>Operate manual winder</td>
</tr>
<tr>
<td>MNMULH311A</td>
<td>Conduct cage operations</td>
</tr>
<tr>
<td>MNMULH312A</td>
<td>Operate winder for shaft sinking</td>
</tr>
<tr>
<td>MNMULH313A</td>
<td>Maintain winder equipment</td>
</tr>
<tr>
<td>MNMULH314A</td>
<td>Inspect and maintain shafts and structures</td>
</tr>
<tr>
<td>MNMULH315A</td>
<td>Monitor, inspect and service ropes and attachments</td>
</tr>
</tbody>
</table>

### Units imported from the Business Services Training Package (BSB01)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSBCMN215A</td>
<td>Participate in environmental work practices</td>
</tr>
<tr>
<td>BSBCMN313A</td>
<td>Maintain environmental procedures</td>
</tr>
<tr>
<td>BSBCMN402A</td>
<td>Develop work priorities</td>
</tr>
<tr>
<td>BSBCMN404A</td>
<td>Develop teams and individuals</td>
</tr>
<tr>
<td>BSBCMN412A</td>
<td>Promote innovation and change</td>
</tr>
<tr>
<td>BSBCNM410A</td>
<td>Coordinate implementation of customer service strategies</td>
</tr>
<tr>
<td>BSBFLM302A</td>
<td>Support leadership in the workplace</td>
</tr>
<tr>
<td>BSBFLM303A</td>
<td>Contribute to effective workplace relationships</td>
</tr>
<tr>
<td>BSBFLM304A</td>
<td>Participate in work teams</td>
</tr>
<tr>
<td>BSBFLM402A</td>
<td>Show leadership in the workplace</td>
</tr>
<tr>
<td>BSBFLM403A</td>
<td>Manage effective workplace relationships</td>
</tr>
<tr>
<td>BSBFLM404A</td>
<td>Lead work teams</td>
</tr>
<tr>
<td>BSBFLM405A</td>
<td>Implement operational plan</td>
</tr>
<tr>
<td>BSBFLM409A</td>
<td>Implement continuous improvement</td>
</tr>
<tr>
<td>BSBFLM501A</td>
<td>Manage personal work priorities and professional development</td>
</tr>
<tr>
<td>BSBFLM502A</td>
<td>Provide leadership in the workplace</td>
</tr>
<tr>
<td>BSBFLM503A</td>
<td>Establish effective workplace relationships</td>
</tr>
<tr>
<td>BSBFLM504A</td>
<td>Facilitate work teams</td>
</tr>
<tr>
<td>BSBFLM505A</td>
<td>Manage operational plan</td>
</tr>
<tr>
<td>BSBFLM509A</td>
<td>Promote continuous improvement</td>
</tr>
<tr>
<td>BSBFLM510A</td>
<td>Facilitate and capitalise on change and innovation</td>
</tr>
<tr>
<td>BSBFLM511A</td>
<td>Develop a workplace learning environment</td>
</tr>
<tr>
<td>BSBMGT502A</td>
<td>Manage people performance</td>
</tr>
<tr>
<td>BSBMGT503A</td>
<td>Prepare budgets and financial plans</td>
</tr>
<tr>
<td>BSBMGT504A</td>
<td>Manage budgets and financial plans</td>
</tr>
<tr>
<td>BSBMGT504A</td>
<td>Manage budgets and financial plans</td>
</tr>
<tr>
<td>BSBMGT601A</td>
<td>Contribute to strategic direction</td>
</tr>
<tr>
<td>BSBMGT602A</td>
<td>Contribute to the development and implementation of strategic plans</td>
</tr>
<tr>
<td>BSBMGT603A</td>
<td>Review and develop business plans</td>
</tr>
<tr>
<td>BSBMGT604A</td>
<td>Manage business operations</td>
</tr>
<tr>
<td>BSBMGT605A</td>
<td>Provide leadership across the organisation</td>
</tr>
<tr>
<td>BSBMGT607A</td>
<td>Manage knowledge and information</td>
</tr>
<tr>
<td>BSBMGT608A</td>
<td>Manage innovation and continuous improvement</td>
</tr>
<tr>
<td>BSBMGT610A</td>
<td>Manage environmental management systems</td>
</tr>
<tr>
<td>BSBSBM402A</td>
<td>Undertake financial planning</td>
</tr>
<tr>
<td>BSBBSBM406A</td>
<td>Manage finances</td>
</tr>
</tbody>
</table>
## Units imported from the Property Development and Management Training Package (PRD01)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRDSIS03A</td>
<td>Implement a project plan</td>
</tr>
<tr>
<td>PRDSIS04A</td>
<td>Determine spatial data requirements to meet the deliverables</td>
</tr>
<tr>
<td>PRDSIS05A</td>
<td>Determine suitable sources of information for the creation of new spatial data sets</td>
</tr>
<tr>
<td>PRDSIS06A</td>
<td>Plan data collection and validation</td>
</tr>
<tr>
<td>PRDSIS07A</td>
<td>Capture new data</td>
</tr>
<tr>
<td>PRDSIS08A</td>
<td>Obtain and validate existing data</td>
</tr>
<tr>
<td>PRDSIS13A</td>
<td>Design a spatial data storage system</td>
</tr>
<tr>
<td>PRDSIS14A</td>
<td>Integrate spatial data sets</td>
</tr>
<tr>
<td>PRDSIS15A</td>
<td>Maintain spatial data</td>
</tr>
<tr>
<td>PRDSIS16A</td>
<td>Store and retrieve spatial data</td>
</tr>
<tr>
<td>PRDSIS18A</td>
<td>Produce project deliverables</td>
</tr>
<tr>
<td>PRDSIS19A</td>
<td>Collate and interpret data</td>
</tr>
<tr>
<td>PRDSIS20A</td>
<td>Design project deliverables</td>
</tr>
<tr>
<td>PRDSIS22A</td>
<td>Control and monitor the spatial components of the project</td>
</tr>
<tr>
<td>PRDSIS24A</td>
<td>Maintain financial records</td>
</tr>
<tr>
<td>PRDSIS25A</td>
<td>Lead and supervise teams</td>
</tr>
<tr>
<td>PRDSIS27A</td>
<td>Maintain client relations</td>
</tr>
<tr>
<td>PRSIR39A</td>
<td>Manage occupational health and safety in the workplace</td>
</tr>
<tr>
<td>PRSIR31A</td>
<td>Undertake process improvement to reduce costs and improve quality service</td>
</tr>
</tbody>
</table>

## Units Imported from the Electrotechnology Training Package (UTE99 V3.03)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTENES010A</td>
<td>Report on the integrity of explosion-protected equipment in hazardous areas</td>
</tr>
<tr>
<td>UTENES012 (A to Z qualifier) A</td>
<td>Attend to breakdowns in hazardous areas</td>
</tr>
<tr>
<td>UTENES107 (A to Z qualifier) A</td>
<td>Install explosion-protected equipment and wiring systems</td>
</tr>
<tr>
<td>UTENES214 (A to Z qualifier) A</td>
<td>Maintain equipment in hazardous areas</td>
</tr>
<tr>
<td>UTENES215 (A to Z qualifier) A</td>
<td>Overhaul and repair explosion-protected equipment</td>
</tr>
<tr>
<td>UTENES303 (A to Z qualifier) A</td>
<td>Undertake commissioning of apparatus and systems’ circuits</td>
</tr>
<tr>
<td>UTENES304 (A to Z qualifier) A</td>
<td>Undertake commissioning of advanced systems and apparatus</td>
</tr>
<tr>
<td>UTENES404 (A to Z qualifier) A</td>
<td>Assess electrical/electronic apparatus</td>
</tr>
<tr>
<td>UTENES406 (A to Z qualifier) A</td>
<td>Develop complex testing and evaluation procedures</td>
</tr>
<tr>
<td>UTENES407 (A to Z qualifier) A</td>
<td>Assess explosion-protected equipment for conformance with standards</td>
</tr>
<tr>
<td>UTENES408 (A to Z qualifier) A</td>
<td>Test installations in hazardous areas</td>
</tr>
<tr>
<td>UTENES409 (A to Z qualifier) A</td>
<td>Inspect visually existing hazardous area installations</td>
</tr>
</tbody>
</table>
### Units Imported from the Electrotechnology Training Package (UTE99 V3.03)

<table>
<thead>
<tr>
<th>Code</th>
<th>Qualifier</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTENES410</td>
<td>A</td>
<td>Inspect in detail hazardous area installations</td>
</tr>
<tr>
<td>UTENES503</td>
<td>A</td>
<td>Diagnose and rectify faults in apparatus and systems’ circuits</td>
</tr>
<tr>
<td>UTENES504</td>
<td>A</td>
<td>Diagnose and rectify faults in advanced systems and apparatus</td>
</tr>
<tr>
<td>UTENES602</td>
<td>A</td>
<td>Develop commissioning programs for apparatus and circuits</td>
</tr>
<tr>
<td>UTENES603</td>
<td>A</td>
<td>Develop maintenance programs for apparatus and circuits</td>
</tr>
<tr>
<td>UTENES604</td>
<td>A</td>
<td>Coordinate and manage commissioning processes</td>
</tr>
<tr>
<td>UTENES605</td>
<td>A</td>
<td>Coordinate and manage routine maintenance</td>
</tr>
<tr>
<td>UTENES606</td>
<td>A</td>
<td>Coordinate and manage installation projects</td>
</tr>
<tr>
<td>UTENES609</td>
<td>A</td>
<td>Develop and manage maintenance programs for hazardous area electrical equipment</td>
</tr>
<tr>
<td>UTENES701</td>
<td>A</td>
<td>Redesign and develop modifications to apparatus and systems’ circuits</td>
</tr>
<tr>
<td>UTENES705</td>
<td>A</td>
<td>Design and develop modifications to explosion-protected equipment</td>
</tr>
<tr>
<td>UTENES707</td>
<td>A</td>
<td>Design electrical installations in hazardous areas</td>
</tr>
<tr>
<td>UTENES708</td>
<td>A</td>
<td>Design explosion-protected electrical systems</td>
</tr>
</tbody>
</table>
### Appendix 1: Coal Training Package - Qualifications Equivalence

<table>
<thead>
<tr>
<th>Qualifications in Coal Training Package MNC04 Version 1</th>
<th>Qualifications in Coal Training Package MNC04 Version 2</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Code</strong></td>
<td><strong>Title</strong></td>
<td><strong>Code</strong></td>
</tr>
<tr>
<td>MNC20104</td>
<td>Certificate II in Surface Coal Operations</td>
<td>MNC20107</td>
</tr>
<tr>
<td>MNC20204</td>
<td>Certificate II in Coal Preparation</td>
<td>MNC20204</td>
</tr>
<tr>
<td>MNC20304</td>
<td>Certificate II in Underground Coal Operations</td>
<td>MNC20307</td>
</tr>
<tr>
<td>MNC30104</td>
<td>Certificate III in Surface Coal Operations</td>
<td>MNC30104</td>
</tr>
<tr>
<td>MNC30204</td>
<td>Certificate III in Coal Preparation</td>
<td>MNC30204</td>
</tr>
<tr>
<td>MNC30304</td>
<td>Certificate III in Underground Coal Operations</td>
<td>MNC30307</td>
</tr>
</tbody>
</table>
## Qualifications in Coal Training Package MNC98

<table>
<thead>
<tr>
<th>Old Qualification</th>
<th>New Qualification</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNC20198 Certificate II in Coal Operations</td>
<td>MNC20104 Certificate II in Surface Coal Operations</td>
<td>The Certificate II in Coal Operations covered both surface and underground streams. This has now been split into 2 qualifications one for surface and for underground. The work required for the new qualifications is equivalent to the old qualification</td>
</tr>
<tr>
<td></td>
<td>MNC20304 Certificate II in Underground Coal Operations</td>
<td></td>
</tr>
<tr>
<td>MNC30198 Certificate III in Coal Operations</td>
<td>MNC30104 Certificate III in Surface Coal Mining Operations</td>
<td>The Certificate III in Coal Operations covered both surface and underground streams. This has now been split into 2 qualifications one for surface and for underground. The work required for the new qualifications is equivalent to the old qualification</td>
</tr>
<tr>
<td></td>
<td>MNC30304 Certificate III in Underground Coal Operations</td>
<td></td>
</tr>
<tr>
<td>MNC40202 Certificate IV in Surface Coal Mining - Open Cut Examiner</td>
<td>MNC40104 Certificate IV in Surface Coal Mining (Open Cut Examiner)</td>
<td>These qualifications are equivalent</td>
</tr>
<tr>
<td>MNC40198 Certificate IV in Coal Operational Management</td>
<td>MNC40204 Certificate IV in Surface Coal Mining</td>
<td>The Certificate IV in Coal Operations covered both surface and underground streams. This has now been split into 2 qualifications one for surface and for underground. The work required for the new qualifications is equivalent to the old qualification</td>
</tr>
<tr>
<td></td>
<td>MNC40304 Certificate IV in Underground Coal Mining</td>
<td></td>
</tr>
<tr>
<td>MNC50298 Diploma of Surface Coal Mining</td>
<td>MNC50104 Diploma of Surface Coal Mining Management</td>
<td>The qualifications are equivalent, but the pre-requisite for Certificate IV in Surface Coal Mining (Open-Cut Examiner) as entry to the qualification has been removed</td>
</tr>
<tr>
<td>MNC50198 Diploma of Coal Operational Management (Underground)</td>
<td>MNC50204 Diploma of Underground Coal Mining Management</td>
<td>These qualifications are equivalent</td>
</tr>
<tr>
<td>MNC50402 Diploma of Mine Mechanical Engineering Management</td>
<td>MNC50304 Diploma of Mine Mechanical Engineering</td>
<td>These qualifications are not equivalent. New units have been included for mine mechanical management.</td>
</tr>
</tbody>
</table>
### Qualifications in Coal Training Package MNC98

<table>
<thead>
<tr>
<th>MNC98</th>
<th>Qualifications in Coal Training Package MNC98</th>
<th>MNC04</th>
<th>Qualifications in Coal Training Package MNC04</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNC50202</td>
<td>Diploma of Mine Electrical Engineering - Surface</td>
<td>MNC50404</td>
<td>Diploma of Mine Electrical Engineering</td>
</tr>
<tr>
<td>MNC50302</td>
<td>Diploma of Mine Electrical Engineering - Underground</td>
<td></td>
<td>The new qualification has been structured to meet the requirements of both surface and underground coal mines. The work required to achieve the new qualification is equivalent to either of the old qualifications.</td>
</tr>
<tr>
<td>MNC50602</td>
<td>Diploma of Mine Surveying</td>
<td>MNC50404</td>
<td>Diploma of Mine Surveying</td>
</tr>
<tr>
<td>MNC60202</td>
<td>Advanced Diploma of Surface Coal Mining</td>
<td>MNC60104</td>
<td>Advanced Diploma of Surface Coal Mining Management</td>
</tr>
<tr>
<td>MNC60198</td>
<td>Advanced Diploma Of Coal Operational Management (Underground)</td>
<td>MNC60204</td>
<td>Advanced Diploma of Underground Coal Mining Management</td>
</tr>
<tr>
<td>MNC60304</td>
<td>Advanced Diploma of Mine Mechanical Engineering</td>
<td></td>
<td>These qualifications are equivalent</td>
</tr>
<tr>
<td>MNC60404</td>
<td>Advanced Diploma of Mine Electrical Engineering</td>
<td></td>
<td>New qualification</td>
</tr>
</tbody>
</table>

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MNC04 Coal Training Package to be reviewed by 31 May 2007 - Version 2
### Appendix 2: Mapping of Changes to Units of Competency

**MNC04 V1 to MNC04 V2**

<table>
<thead>
<tr>
<th>MNC04 Version 1</th>
<th>MNC04 Version 2</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit Code</strong></td>
<td><strong>Unit Title</strong></td>
<td><strong>Unit Code</strong></td>
</tr>
<tr>
<td>MNCC1001A</td>
<td>Work safely</td>
<td>MNCC1001B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MNCC1006A</td>
<td>Conduct local risk assessment</td>
<td>MNCC1006B</td>
</tr>
<tr>
<td>MNCG1002A</td>
<td>Implement and apply risk management processes</td>
<td>MNCG1002B</td>
</tr>
<tr>
<td>MNCG1003A</td>
<td>Establish the mine risk assessment and control system</td>
<td>MNCG1003A</td>
</tr>
<tr>
<td>MNCG1031A</td>
<td>Remove, fit and adjust wheels</td>
<td>MNCG1031B</td>
</tr>
<tr>
<td>MNCG1032A</td>
<td>Remove, repair and refit tyres and tubes</td>
<td>MNCG1032B</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Unit Code</th>
<th>Unit Title</th>
<th>Unit Code</th>
<th>Unit Title</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCU1048A</td>
<td>Conduct shotfiring</td>
<td>MNCU1048B</td>
<td>Conduct shotfiring</td>
<td>Changes made to Performance Criteria; Range Statement &amp; Evidence Guide</td>
</tr>
<tr>
<td>MNCU1049A</td>
<td>Support shotfiring operations</td>
<td>MNCU1049B</td>
<td>Support shotfiring operations</td>
<td>Changes made to Performance Criteria; Range Statement &amp; Evidence Guide</td>
</tr>
<tr>
<td>MNMUGC1216A</td>
<td>Conduct skip operations</td>
<td>MNMULH204A</td>
<td>Conduct skip operations</td>
<td></td>
</tr>
<tr>
<td>MNMUGC1217A</td>
<td>Operate automated winder</td>
<td>MNMULH205A</td>
<td>Operate automated winder</td>
<td></td>
</tr>
<tr>
<td>MNMUGC1218A</td>
<td>Operate manual winder</td>
<td>MNMULH306A</td>
<td>Operate manual winder</td>
<td></td>
</tr>
<tr>
<td>MNMUGC224A</td>
<td>Conduct cage operations</td>
<td>MNMULH311A</td>
<td>Conduct cage operations</td>
<td></td>
</tr>
<tr>
<td>MNMUGC225A</td>
<td>Operate winder for shaft sinking</td>
<td>MNMULH312A</td>
<td>Operate winder for shaft sinking</td>
<td></td>
</tr>
<tr>
<td>MNMUGC226A</td>
<td>Maintain winder equipment</td>
<td>MNMULH313A</td>
<td>Maintain winder equipment</td>
<td></td>
</tr>
<tr>
<td>MNMUGC227A</td>
<td>Inspect and maintain shafts and structures</td>
<td>MNMULH314A</td>
<td>Inspect and maintain shafts and structures</td>
<td></td>
</tr>
<tr>
<td>MNMUGC228A</td>
<td>Monitor, inspect and service ropes and attachments</td>
<td>MNMULH315A</td>
<td>Monitor, inspect and service ropes and attachments</td>
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<tr>
<td>MNCO1040A</td>
<td>Conduct shotfiring operations</td>
<td>MNCO1040B</td>
<td>Conduct shotfiring operations</td>
<td>Changes made to Performance Criteria; Range Statement and Evidence Guide</td>
</tr>
<tr>
<td>MNCO1041A</td>
<td>Support shotfiring operations</td>
<td>MNCO1041B</td>
<td>Support shotfiring operations</td>
<td>Changes made to Performance Criteria; Range Statement and Evidence Guide</td>
</tr>
<tr>
<td>UTENES012ZA</td>
<td>Attend to breakdowns in hazardous areas</td>
<td>UTENES012 (A to Z qualifier) A</td>
<td>Attend to breakdowns in hazardous areas</td>
<td></td>
</tr>
<tr>
<td>UTENES107ZA</td>
<td>Install explosion-protected equipment and wiring systems</td>
<td>UTENES107 (A to Z qualifier) A</td>
<td>Install explosion-protected equipment and wiring systems</td>
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</tr>
<tr>
<td>UTENES214ZA</td>
<td>Maintain equipment in hazardous areas</td>
<td>UTENES214 (A to Z qualifier) A</td>
<td>Maintain equipment in hazardous areas</td>
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<tr>
<td>UTENES215ZA</td>
<td>Overhaul and repair explosion-protected equipment</td>
<td>UTENES215 (A to Z qualifier) A</td>
<td>Overhaul and repair explosion-protected equipment</td>
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</table>

Removal of Element 4 "Add and remove ballast"

Replaced 8 imported units from the Metalliferous Mining Training Package MNM05 V1.
<table>
<thead>
<tr>
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<th>Unit Title</th>
<th>Unit Code</th>
<th>Unit Title</th>
<th>Comments</th>
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<tr>
<td></td>
<td>equipment</td>
<td></td>
<td></td>
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<tr>
<td>UTENES303BA</td>
<td>Undertake commissioning of apparatus and systems’ circuits</td>
<td>UTENES303 (A to Z qualifier) A</td>
<td>Undertake commissioning of apparatus and systems’ circuits</td>
<td>Correction of all UTENES imported unit codes</td>
</tr>
<tr>
<td>UTENES304BA</td>
<td>Undertake commissioning of advanced systems and apparatus</td>
<td>UTENES304 (A to Z qualifier) A</td>
<td>Undertake commissioning of advanced systems and apparatus</td>
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</tr>
<tr>
<td>UTENES404BA</td>
<td>Assess electrical/electronic apparatus</td>
<td>UTENES404 (A to Z qualifier) A</td>
<td>Assess electrical/electronic apparatus</td>
<td></td>
</tr>
<tr>
<td>UTENES406BA</td>
<td>Develop complex testing and evaluating procedures</td>
<td>UTENES406 (A to Z qualifier) A</td>
<td>Develop complex testing and evaluating procedures</td>
<td></td>
</tr>
<tr>
<td>UTENES407ZA</td>
<td>Assess explosion-protected equipment for conformance with standards</td>
<td>UTENES407 (A to Z qualifier) A</td>
<td>Assess explosion-protected equipment for conformance with standards</td>
<td></td>
</tr>
<tr>
<td>UTENES408ZA</td>
<td>Test installations in hazardous areas</td>
<td>UTENES408 (A to Z qualifier) A</td>
<td>Test installations in hazardous areas</td>
<td></td>
</tr>
<tr>
<td>UTENES409ZA</td>
<td>Inspect visually existing hazardous area installations</td>
<td>UTENES409 (A to Z qualifier) A</td>
<td>Inspect visually existing hazardous area installations</td>
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</tr>
<tr>
<td>UTENES410ZA</td>
<td>Inspect in detail hazardous area installations</td>
<td>UTENES410 (A to Z qualifier) A</td>
<td>Inspect in detail hazardous area installations</td>
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</tr>
<tr>
<td>UTENES503BA</td>
<td>Diagnose and rectify faults in apparatus and associated systems’ circuits</td>
<td>UTENES503 (A to Z qualifier) A</td>
<td>Diagnose and rectify faults in apparatus and associated systems’ circuits</td>
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</tr>
<tr>
<td>UTENES504BA</td>
<td>Diagnose and rectify faults in advanced systems and apparatus</td>
<td>UTENES504A</td>
<td>Diagnose and rectify faults in advanced systems and apparatus</td>
<td></td>
</tr>
<tr>
<td>UTENES602BA</td>
<td>Develop commissioning programs for apparatus and circuits</td>
<td>UTENES602 (A to Z qualifier) A</td>
<td>Develop commissioning programs for apparatus and circuits</td>
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<tr>
<td>UTENES603BA</td>
<td>Develop maintenance programs for apparatus and circuits</td>
<td>UTENES603 (A to Z qualifier) A</td>
<td>Develop maintenance programs for apparatus and circuits</td>
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<tr>
<td>UTENES604BA</td>
<td>Coordinate and manage</td>
<td>UTENES604 (A to Z qualifier) A</td>
<td>Coordinate and manage</td>
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</tr>
<tr>
<td>Unit Code</td>
<td>Unit Title</td>
<td>Unit Code</td>
<td>Unit Title</td>
<td>Comments</td>
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<td>-----------------------------------------------------------</td>
<td>-------------------------------</td>
<td>-----------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>UTENES605BA</td>
<td>Coordinate and manage routine maintenance</td>
<td>UTENES605 (A to Z qualifier) A</td>
<td>Coordinate and manage routine maintenance</td>
<td></td>
</tr>
<tr>
<td>UTENES606BA</td>
<td>Coordinate and manage installation projects</td>
<td>UTENES606 (A to Z qualifier) A</td>
<td>Coordinate and manage installation projects</td>
<td></td>
</tr>
<tr>
<td>UTENES609ZA</td>
<td>Develop and manage maintenance programs for hazardous</td>
<td>UTENES609 (A to Z qualifier) A</td>
<td>Develop and manage maintenance programs for hazardous</td>
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</tr>
<tr>
<td></td>
<td>electrical equipment</td>
<td></td>
<td>electrical equipment</td>
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</tr>
<tr>
<td>UTENES701BA</td>
<td>Redesign and develop modifications to apparatus and</td>
<td>UTENES701 (A to Z qualifier) A</td>
<td>Redesign and develop modifications to apparatus and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>associated systems’ circuits</td>
<td></td>
<td>associated systems’ circuits</td>
<td></td>
</tr>
<tr>
<td>UTENES705ZA</td>
<td>Design and develop modifications to explosion</td>
<td>UTENES705 (A to Z qualifier) A</td>
<td>Design and develop modifications to explosion protected</td>
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</tr>
<tr>
<td></td>
<td>protected equipment</td>
<td></td>
<td>protected equipment</td>
<td></td>
</tr>
<tr>
<td>UTENES707ZA</td>
<td>Design electrical installations in hazardous areas</td>
<td>UTENES707 (A to Z qualifier) A</td>
<td>Design electrical installations in hazardous areas</td>
<td></td>
</tr>
<tr>
<td>UTENES708ZA</td>
<td>Design explosion protected electrical systems</td>
<td>UTENES708 (A to Z qualifier) A</td>
<td>Design explosion protected electrical systems</td>
<td></td>
</tr>
</tbody>
</table>

**MNC98to MNC04 V1**

**Core Units**

<table>
<thead>
<tr>
<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit of Competency MNC98</td>
<td>Unit of Competency MNC04 V1</td>
<td>Changes</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------</td>
<td>---------</td>
</tr>
</tbody>
</table>
| MNC.C1.A Work safely     | MNCC1001A Work safely       | This unit is not equivalent:  
|                          |                             | ▪ Element 4 “Apply initial response first aid” has been removed and re-developed as Unit MNCG1013A Apply initial response first aid.  
|                          |                             | ▪ The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied  
|                          |                             | ▪ Minor additions/adjustments in the Range of Variables  
| MNC.C2.A Work cooperatively with others |                             | Deleted |
| MNC.C3.A Solve individual work problems |                             | Deleted |
| MNC.C4.A Plan and organise individual work |                             | Deleted |
| MNC.C5.A Comply with site work systems / procedures | MNCC1005A Comply with site work systems/procedures | These units are not equivalent:  
|                                      |                             | ▪ The new unit focuses on safety rather than quality  
|                                      |                             | ▪ Changes to Performance Criteria, and Evidence Guide  
|                                      |                             | ▪ The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied  
| MNC.CO6.A Conduct local risk assessment | MNCC1006A Conduct local risk assessment | These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria. |
### General Units

<table>
<thead>
<tr>
<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNC.C7.A Communicate in the Workplace</td>
<td>MNCC1007A Communicate in the workplace</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td><strong>New unit</strong></td>
<td>BSBCM215A Participate in environmental work practices</td>
<td></td>
</tr>
<tr>
<td>New unit</td>
<td>BSBCM313A Maintain environmental procedures</td>
<td></td>
</tr>
<tr>
<td>MNC.G10.A Conduct mine surveying</td>
<td>MNCG1000A Conduct mine surveying operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
</tbody>
</table>
| MNC.G1.A Develop and implement risk control processes | MNCG1001A Apply risk management processes | These units are equivalent other than:  
- The Unit title has been changed to “Apply risk management processes”  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied. |
| MNC.G2.A Facilitate the risk management process | MNCG1002A Implement and apply the risk management processes | These units are equivalent other than:  
- The Unit title has been changed to “Implement and apply the risk management processes”  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied. |
<p>| MNC.G3.A Manage the risk control system | MNCG1003A Establish the risk management system | These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria. |</p>
<table>
<thead>
<tr>
<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNC.G4.A Respond to local emergencies and incidents</td>
<td>MNCG1004A Respond to local emergencies and incidents</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
</tbody>
</table>
| MNC.G5.A Conduct fire team operations | MNCG1005A Conduct fire team operations | These units are equivalent other than:  
- PC 1.6 has been deleted  
- PC 2.1 has been re-written as “Receive, clarify and confirm notification of fire operations from the appropriate authority”  
- PC 2.3 has been re-written as “Details of the type, nature, source and intensity of the fire are identified and passed to appropriate authorities or received and clarified”  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied. |
| MNC.G6.A Incorporate health and hygiene factors into mine management | MNCG1006A Incorporate health and hygiene factors into mine management | These units are equivalent other than:  
- PC 1.3 re-written as “Test the proposed objectives and clarify the scope of the investigation”  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied. |
<p>| MNC.G7.A Implement and apply health and hygiene measures | MNCG1007A Implement and monitor health and hygiene management systems | These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria. |
| New unit | MNCG1008A Conduct safety and health investigations |  |
| New unit | MNCG1009A Communicate information |  |
| New unit | MNCG1010A Assess and implement life support systems and stabilise casualties |  |
| New unit | MNCG1011A Extricate and transport people involved in incidents |  |</p>
<table>
<thead>
<tr>
<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNC.U92.A Maintain bathroom hygiene</td>
<td>MNCG1012A Maintain bathroom hygiene</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>New unit</td>
<td>MNCG1013A Apply initial response First Aid</td>
<td>This unit replaces element 4 from the revised MNC1001A Work safely.</td>
</tr>
<tr>
<td>MNC.G25.A Access, update and retrieve simple computerised information</td>
<td>MNCG1025A Access, update and retrieve simple computerised information</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
</tbody>
</table>
| MNC.G26.A Operate a computer to produce documents | MNCG1026A Operate a computer to produce documents | These units are equivalent other than:
- PC 1.4 has been re-written as “Load or select appropriate software from the menu”
- PC 5.3 has been re-written as “Make back up files in accordance with site procedures if required”
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied. |
| MNC.G27.A Use keyboard skills and advanced functions of software to produce complex documents | MNCG1027A Use keyboard skills and advanced functions of software packages to produce complex documents | These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria. |
| MNC.G28.A Use advanced functions of software packages to produce documents, reports and worksheets | MNCG1028A Use advanced functions of software packages to produce documents, reports and worksheets | These units are equivalent other than:
- PC 1.1 has been re-written as “Presentation and information requirements of the document are reflected in the layout and style”
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied. |
<table>
<thead>
<tr>
<th>Unit of Competency MNC.G29A</th>
<th>Unit of Competency MNC.G30.A</th>
<th>Unit of Competency MNC.G35.A</th>
<th>Unit of Competency MNC.G36.A</th>
<th>Unit of Competency MNC.G37.A</th>
<th>Unit of Competency MNC.G38.A</th>
<th>Unit of Competency MNC.G39.A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer information through a computer</td>
<td>Conduct purchasing</td>
<td>Apply operational maintenance skills</td>
<td>Provide electrical support (to tradesperson)</td>
<td>Service mine plant and equipment</td>
<td>Perform basic cutting and welding</td>
<td>Fit and maintain tyres and wheels</td>
</tr>
<tr>
<td>MNCG1029A</td>
<td>MNCG1030A</td>
<td>MNCG1035A</td>
<td>MNCG1036A</td>
<td>MNCG1037A</td>
<td>MNCG1038A</td>
<td>MNCG1031A</td>
</tr>
</tbody>
</table>
| These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria. | These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria. | These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria. | These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria. | These units are equivalent other than:  
- PC 3.4 “Provide operator support” has been removed  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied | | MNC.G39.A has been divided into two units:  
MNCG1031A Remove, fit and adjust wheel(s) and MNCG1032A Remove, repair and refit tyres and tubes  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
<table>
<thead>
<tr>
<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNC.G40.A</td>
<td>Operate gantry crane</td>
<td>MNCG1040A</td>
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<tr>
<td>MNC.G41.A</td>
<td>Conduct non-slewing crane operations</td>
<td>MNCG1041A</td>
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<tr>
<td>MNC.G42.A</td>
<td>Conduct slewing crane operations</td>
<td>MNCG1042A</td>
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<tr>
<td>MNC.G43.A</td>
<td>Conduct dogging operations</td>
<td>MNCG1043A</td>
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</tr>
<tr>
<td>MNC.G44.A</td>
<td>Conduct basic rigging operations</td>
<td>MNCG1044A</td>
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<tr>
<td>Unit of Competency MNC98</td>
<td>Unit of Competency MNC04 V1</td>
<td>Changes</td>
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</tr>
<tr>
<td>MNC.G45.A: Conduct intermediate rigging operations</td>
<td>MNCG1045A: Conduct intermediate rigging operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.G46.A: Conduct basic scaffolding operations</td>
<td>MNCG1046A: Conduct basic scaffolding operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.G47.A: Conduct intermediate scaffolding operations</td>
<td>MNCG1047A: Conduct intermediate scaffolding operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
</tbody>
</table>
| MNC.G48.A: Conduct forklift operations | MNCG1048A: Conduct forklift operations | These units are equivalent other than:  
  - PC 3.4 “Provide operator support during preparation for or conduct of major maintenance tasks in accordance with site requirements” has been deleted  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
| MNC.G49.A: Operate elevating work platform | MNCG1049A: Operate elevating work platform | These Units are equivalent other than:  
  - PC 3.4 “Provide operator support during preparation for or conduct of major maintenance tasks in accordance with site requirements” has been deleted  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
| MNC.G50.A: Operate vehicle loading crane | MNCG1050A: Operate vehicle loading crane | These units are not equivalent:  
  - PC’s added  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
<table>
<thead>
<tr>
<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNC.G55.A</td>
<td>Extend, retract and maintain conveyor componentry</td>
<td>MNCG1055A</td>
</tr>
<tr>
<td>MNC.G56.A</td>
<td>Install, commission and maintain major conveyor systems</td>
<td>MNCG1056A</td>
</tr>
<tr>
<td>MNC.G57.A</td>
<td>Repair and splice conveyor belting</td>
<td>MNCG1057A</td>
</tr>
<tr>
<td>MNC.G60.A.</td>
<td>Operate support equipment</td>
<td>MNCG1060A</td>
</tr>
<tr>
<td>MNC.G61.A.</td>
<td>Operate light vehicle</td>
<td>MNCG1061A</td>
</tr>
<tr>
<td>MNC.G62.A</td>
<td>Operate medium vehicle</td>
<td>MNCG1062A</td>
</tr>
<tr>
<td>Unit of Competency MNC98</td>
<td>Unit of Competency MNC04 V1</td>
<td>Changes</td>
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</tr>
<tr>
<td>MNC.G63.A Operate heavy rigid vehicle</td>
<td>MNCG1063A Operate heavy rigid vehicle</td>
<td>These units are not equivalent. Significant changes have been made to the unit, including the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria. The performance criterion “2.5. Manage engine power to ensure efficiency of vehicle movement and to minimise damage to the engine and drive line” has been added.</td>
</tr>
<tr>
<td>MNC.G64.A Operate articulated vehicle</td>
<td>MNCG1064A Operate articulated vehicle</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.G65.A Operate double vehicle</td>
<td>MNCG1065A Operate multi-combination vehicles on mine sites</td>
<td>The units MNC.G65.A and MNC.G66.A have been combined</td>
</tr>
<tr>
<td>MNC.G66.A Operate road train</td>
<td></td>
<td>Deleted</td>
</tr>
<tr>
<td>MNC.G67.A Transport dangerous goods</td>
<td></td>
<td>Deleted</td>
</tr>
<tr>
<td>MNC.G68.A Load and unload vehicle</td>
<td></td>
<td>Deleted</td>
</tr>
<tr>
<td>MNC.G69.A Test operational function of production vehicles and equipment</td>
<td>MNCG1068A Test operational functions of mine vehicles and equipment</td>
<td>This unit is equivalent to, and replaces Units MNC.G69.A and MNC.G70.A, other than:   - PC 1.1: “Obtain, interpret and clarify work requirements before proceeding” has been added   - PC 2.2: “Access, interpret and apply geological and survey data required to complete the allocated work” has been added   The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied</td>
</tr>
<tr>
<td>MNC.G70.A Test operational function of support vehicles and ancillary equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MNC.O34.A Conduct conveyor-car high wall mining operations</td>
<td>MNCG1069A Conduct conveyor-car high wall mining operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>Unit of Competency MNC98</td>
<td>Unit of Competency MNC04 V1</td>
<td>Changes</td>
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</tr>
<tr>
<td>MNC.O35.A</td>
<td>Provide deck support for conveyor-car high wall mining operations</td>
<td>MNCG1070A</td>
</tr>
<tr>
<td>MNC.G81.A</td>
<td>Implement, monitor and report on contracts</td>
<td>MNCG1081A</td>
</tr>
<tr>
<td>MNC.G82.A</td>
<td>Implement, monitor, rectify and report on inventory control system</td>
<td>MNCG1082A</td>
</tr>
<tr>
<td>MNC.G83.A</td>
<td>Implement, monitor, rectify and report on maintenance management systems</td>
<td>MNCG1083A</td>
</tr>
<tr>
<td>MNC.G84.A</td>
<td>Implement, monitor, rectify and report on mobile plant and equipment systems</td>
<td>MNCG1084A</td>
</tr>
<tr>
<td>MNC.G90.A</td>
<td>Establish and maintain the mine electrical reticulation and protection system</td>
<td>MNCG1090A</td>
</tr>
<tr>
<td>Unit of Competency MNC98</td>
<td>Unit of Competency MNC04 V1</td>
<td>Changes</td>
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<tr>
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</tr>
<tr>
<td>MNC.G91.A Implement, monitor, rectify and report on interfaces between electrical and mechanical componentry</td>
<td>MNCG1091A Implement, monitor, rectify and report on interfaces between electrical and mechanical componentry</td>
<td>These units are equivalent other than, revised wording for consistency, the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNIL03A Establish and manage the information system</td>
<td>MNCG1101A Establish and maintain the environmental management system</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNIC01A Establish the mine statutory/legal compliance system</td>
<td>MNCG1102A Establish the statutory compliance management system</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNQQM10A Statutory compliance</td>
<td>MNCG1103A Implement and maintain management systems to control risk</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>New unit</td>
<td>MNCG1105A Apply the mine occupational health and safety management system</td>
<td></td>
</tr>
<tr>
<td>MNIC09A Establish and maintain the mine OH&amp;S system</td>
<td>MNCG1107A Establish and maintain the mine Occupational Health and Safety management system</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNQSM08A Design, implement, maintain and evaluate quality system</td>
<td>MNCG1111A Establish and maintain the quality system</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNQTL08A Implement and monitor quality systems</td>
<td>MNCG1113A Apply quality management system</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
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<tr>
<td>Unit of Competency MNC98</td>
<td>Unit of Competency MNC04 V1</td>
<td>Changes</td>
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</tr>
<tr>
<td>MNIC10A Establish the mine emergency systems</td>
<td>MNCG1116A Establish mine emergency preparedness and response systems</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNIL09A Manage major incidents and emergencies</td>
<td>MNCG1119A Manage major incidents and emergencies</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNIL13A Initiate, monitor and supervise contracts</td>
<td>MNCG1125A Initiate, monitor and supervise contracts</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNIL17A Conduct business negotiations</td>
<td>MNCG1126A Conduct business negotiations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>New unit</td>
<td>MNCG1128A Establish mine mechanical plant services and infrastructure systems</td>
<td></td>
</tr>
<tr>
<td>New unit</td>
<td>MNCG1129A Establish mechanical standard and engineering practices for transport and production equipment</td>
<td></td>
</tr>
<tr>
<td>New unit</td>
<td>MNCG1130A Establish maintenance management system for mechanical plant and equipment</td>
<td></td>
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<tr>
<td>New unit</td>
<td>BSBFLM302A Support leadership in the workplace</td>
<td></td>
</tr>
<tr>
<td>New unit</td>
<td>BSBFLM303A Contribute to effective workplace relationships</td>
<td></td>
</tr>
<tr>
<td>New unit</td>
<td>BSBFLM304A Participate in work teams</td>
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<tr>
<td>New unit</td>
<td>BSBCM402A Develop work priorities</td>
<td></td>
</tr>
<tr>
<td>New unit</td>
<td>BSBCM404A Develop teams and individuals</td>
<td></td>
</tr>
<tr>
<td>BSXFMI307A Manage quality customer service</td>
<td>BSBCM410A Coordinate implementation of customer service strategies</td>
<td></td>
</tr>
<tr>
<td>New unit</td>
<td>BSBCM412A Promote innovation and change</td>
<td></td>
</tr>
<tr>
<td>New unit</td>
<td>BSBFLM402A Show leadership in the workplace</td>
<td></td>
</tr>
<tr>
<td>New unit</td>
<td>BSBFLM403A Manage effective workplace relationships</td>
<td></td>
</tr>
<tr>
<td>Unit of Competency MNC98</td>
<td>Unit of Competency MNC04 V1</td>
<td>Changes</td>
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</tr>
<tr>
<td>New unit</td>
<td>BSBFLM404A</td>
<td>Lead work teams</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBFLM405A</td>
<td>Implement operational plan</td>
</tr>
<tr>
<td>New unit</td>
<td>Implement and monitor continuous improvement</td>
<td>Implement continuous improvement</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBFLM409A</td>
<td></td>
</tr>
<tr>
<td>BSXFMI501A</td>
<td>Manage personal work priorities and professional development</td>
<td>Manage personal work priorities and professional development</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBFLM412A</td>
<td>Promote innovation and change</td>
</tr>
<tr>
<td>BSXFMI503A</td>
<td>Establish and manage effective workplace relationships</td>
<td>Establish effective workplace relationships</td>
</tr>
<tr>
<td>BSXFMI504A</td>
<td>Participate in, lead and facilitate work teams</td>
<td>Facilitate work teams</td>
</tr>
<tr>
<td>BSXFMI505A</td>
<td>Manage operations to achieve planned outcomes</td>
<td>Manage operational plan</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBFLM506A</td>
<td>Manage workplace information systems</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBFLM507A</td>
<td>Manage quality customer service</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBFLM509A</td>
<td>Promote continuous improvement</td>
</tr>
<tr>
<td>BSXFMI510A</td>
<td>Facilitate and capitalise on change and innovation</td>
<td>Facilitate and capitalise on change and innovation</td>
</tr>
<tr>
<td>BSXFMI511A</td>
<td>Contribute to development of a workplace learning environment</td>
<td>Develop a workplace learning environment</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBSBM402A</td>
<td>Undertake financial planning</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBSBM406A</td>
<td>Manage finances</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBMGT302A</td>
<td>Manage people performance</td>
</tr>
<tr>
<td>Unit of Competency MNC98</td>
<td>Unit of Competency MNC04 V1</td>
<td>Changes</td>
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</tr>
<tr>
<td>New unit</td>
<td>BSBMGT503A</td>
<td>Prepare budgets and financial plans</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBMGT504A</td>
<td>Manage budgets and financial plans</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBMGT601A</td>
<td>Contribute to strategic direction</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBMGT602A</td>
<td>Contribute to the development and implementation of strategic plans</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBMGT603A</td>
<td>Review and develop business plans</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBMGT604A</td>
<td>Manage business operations</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBMGT605A</td>
<td>Provide leadership across the organisation</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBMGT607A</td>
<td>Manage knowledge and information</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBMGT608A</td>
<td>Manage innovation and continuous improvement</td>
</tr>
<tr>
<td>New unit</td>
<td>BSBMGT610A</td>
<td>Manage environmental management systems</td>
</tr>
</tbody>
</table>
## Underground Units

<table>
<thead>
<tr>
<th>New unit</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNC.U12.A Operate power tram</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.U13.A Conduct rail vehicle operations</td>
<td>These units are equivalent other than:</td>
</tr>
<tr>
<td></td>
<td>- PC 1.2 has been re-written as “Access, interpret and apply mine environmental data required to complete the allocated work accordance with site procedures”</td>
</tr>
<tr>
<td></td>
<td>- PC 2.6 has been re-written as “Safely carry out towing and pushing of equipment and plant in accordance with the manufacturers specifications and/or site procedures”</td>
</tr>
<tr>
<td></td>
<td>The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied.</td>
</tr>
<tr>
<td>MNC.U14.A Conduct tracked vehicle/plant operations</td>
<td>These units are equivalent other than:</td>
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<tr>
<td></td>
<td>- PC 1.2 has been re-written as “Access, interpret and apply mine environmental data required to complete the allocated work”</td>
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<td>- PC 2.5 has been re-written as “Safely load/unload personnel or materials in accordance with manufacturers site requirements”</td>
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<td>- PC 2.6 has been re-written as “Safely carry out towing and pushing of equipment and plant in accordance with the manufacturers specifications and/or site requirements”</td>
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<td>The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied.</td>
</tr>
<tr>
<td>MNC.U15.A Operate wheeled vehicles without attachments</td>
<td>MNC.U15.A has been divided into two units MNCU1015A Conduct wheeled vehicle operations (non-articulated) and MNCU1017A Conduct wheeled vehicle operations (articulated)</td>
</tr>
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<td>Unit of Competency MNC98</td>
<td>Unit of Competency MNC04 V1</td>
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<tr>
<td>MNC.U16.A Conduct wheeled grader operations</td>
<td>MNCU1016A Conduct wheeled grader operations</td>
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<tr>
<td>MNC.U26.A Conduct environmental monitoring</td>
<td>MNCU1026A Conduct environmental monitoring</td>
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<tr>
<td>New unit</td>
<td>MNCU1037A Escape from hazardous situation unaided</td>
</tr>
<tr>
<td>New unit</td>
<td>MNCU1038A Provide aided rescue to endangered</td>
</tr>
<tr>
<td>New unit</td>
<td>personnel</td>
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<tr>
<td>New Unit</td>
<td>MNCU1039A Respond to in-seam incident</td>
</tr>
<tr>
<td>MNC.U40.A Install, maintain and recover gas</td>
<td>MNCU1040A Install, maintain and recover gas</td>
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<td>drainage systems</td>
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<td>MNC.U41.A Install, maintain and recover</td>
<td>MNCU1041A Install, maintain and recover electrical</td>
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<td>electrical services</td>
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<tr>
<td>MNC.U42.A Install, maintain and recover water</td>
<td>MNCU1042A Install, maintain and recover water and</td>
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<td>and air systems</td>
<td>systems</td>
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<td>Unit of Competency MNC98</td>
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<td>MNC.U44.A Conduct special roadway</td>
<td>MNCU1044A Conduct special roadway</td>
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<td>operations</td>
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<td>MNC.U45.A Recover equipment</td>
<td>MNCU1045A Recover equipment</td>
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<td>MNC.U46.A Conduct winding operations</td>
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<td>Unit of Competency MNC04 V1</td>
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</table>
| MNC.U48.A Conduct shotfiring | MNCU1048A Conduct shotfiring | These units are equivalent other than:  
- PC 3.7 has been deleted  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
| MNC.U49.A Support shotfiring operations | MNCU1049A Support shotfiring operations | These units are equivalent other than:  
- PC 2.6 “Identify and report any deteriorated explosives and accessories” has been added  
- PC 2.7 “Ensure explosives are transported in accordance with legislative requirements and site procedures” has been added  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
| MNC.U50.A Conduct rotational drilling | MNCU1050A Conduct rotational drilling | These units are equivalent other than:  
- References to “tight radius drilling” have been deleted  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
| MNC.U51A Conduct directional drilling | MNCU1051A Conduct down-hole motor drilling | These units are equivalent other than:  
- “Down hole motor drilling” has been changed to “directional drilling” throughout the unit  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
| MNC.U53.A Conduct basic strata control operations | MNCU1053A Conduct basic strata control operations | These units are equivalent other than:  
- A new PC: 2.5 Drill holes for rib/roof bolt installation in accordance with manufacturer’s and/or site requirements has been added  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
<table>
<thead>
<tr>
<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
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</thead>
</table>
| MNC.U54.A Conduct specialised strata control operations | MNCU1054A Conduct specialised strata control operations | These units are equivalent other than:  
- A new PC: 2.5 Drill holes for rib/roof bolt installation in accordance with manufacturer’s and/or site requirements has been added  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
| MNC.U60.A Conduct roadway maintenance | MNCU1060A Conduct roadway maintenance | These units are equivalent other than:  
- PC 4.4 re operator support during maintenance has been deleted  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
| MNC.U61.A Conduct stonedusting operations | MNCU1061A Conduct stonedusting operations | These units are equivalent other than:  
- PC 2.2 & 3.2 have been deleted  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
| MNC.U62.A Dewater roadways and work areas | MNCU1062A Dewater roadways and work areas | These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria |
| MNC.U63.A Lay and recover rail | MNCU1063A Lay and recover rail | These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria |
| MNC.U64.A Install and maintain explosion barriers | MNCU1064A Install and maintain explosion barriers | These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria |
| MNCU.65.A Construct and maintain basic ventilation devices | MNCU1065A Construct and maintain basic ventilation devices | These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria |
| MNC.U66.A Construct and maintain ventilation devices | MNCU1066A Construct and maintain ventilation devices | These units are equivalent other than:  
- PC 1.2: “mine environmental” has been added  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
<table>
<thead>
<tr>
<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
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</thead>
<tbody>
<tr>
<td>MNC.U70.A Conduct continuous miner operations</td>
<td>MNCU1070A Conduct continuous miner operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.U71.A Conduct shuttle car operations</td>
<td>MNCU1071A Conduct shuttle car operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.U72.A Conduct feeder breaker operations</td>
<td>MNCU1072A Conduct feeder breaker operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.U73.A Conduct face ventilation operations</td>
<td>MNCU1073A Conduct face ventilation operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.U74.A Conduct outburst mining operations</td>
<td>MNCU1074A Conduct outburst mining operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.U75.A Conduct shearer operations</td>
<td>MNCU1075A Conduct shearer operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.U76.A Conduct longwall face equipment operations</td>
<td>MNCU1076A Conduct longwall face equipment operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.U77.A Conduct pantech operations</td>
<td>MNCU1077A Operate longwall ancillary equipment</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.U78.A Install and recover longwall equipment</td>
<td>MNCU1078A Install and recover longwall equipment</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.U79.A Operate breaker line supports</td>
<td>MNCU1079A Operate breaker line supports</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.U80.A Conduct flexible conveyor train (FCT) operations</td>
<td>MNCU1080A Conduct flexible conveyor train (FCT) operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.U91.A Maintain lamp cabin operations</td>
<td>MNCU1091A Maintain lamp cabin operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>Unit of Competency MNC98</td>
<td>Unit of Competency MNC04 V1</td>
<td>Changes</td>
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<tr>
<td>MNC.U92.A Maintain bathroom hygiene</td>
<td>MNCG1012A Maintain bathroom hygiene</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.U95.A Monitor control processes</td>
<td>MNCU1095A Monitor control processes</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.U101.A Apply spontaneous combustion management measures</td>
<td>MNCU1101A Apply spontaneous combustion management measures</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
</tbody>
</table>
| MNC.U102.A Establish the spontaneous combustion management plan | MNCU1102A Establish the spontaneous combustion management plan | These units are not equivalent:  
- PC 6.6 and 6.7 have been deleted  
- New PC6.6 “Identify and correct non-compliance or other discrepancies/deficiencies revealed by audit”  
New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria. |
| MNC.U103.A Implement the spontaneous combustion management plan | MNCU1103A Implement the spontaneous combustion management plan | These units are not equivalent:  
- PC’s have been added or replaced  
- Range of Variables, Critical Aspects of Assessment, Required Knowledge, Required Skills and Method of Assessment have been adjusted.  
New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria. |
| MNC.U104.A Apply the spontaneous combustion management plan | MNCU1104A Apply the spontaneous combustion management plan | These units are equivalent other than:  
- Element 4.1 has been changed to “Identify and respond to spontaneous combustion indicators”  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied. |
| MNC.U106.A Establish ventilation management plan | MNCU1106A Establish the ventilation management plan | These units are not equivalent:  
- PC’s deleted  
- PC’s re-written  
- New Element 6 and associated Performance Criteria “Plan and prepare for the implementation of the ventilation management plan” included  
- Minor wording changes for consistency  
New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria. |
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<tr>
<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
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</thead>
</table>
| MNC.U107.A Implement ventilation management plan | MNCU1107A Implement the ventilation management plan | These units are not equivalent:  
  - New PC added and others amended  
  - Range of Variables, Critical Aspects of Assessment, Required Knowledge, Required Skills and Method of Assessment have been adjusted. 
  New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria |
| MNC.U108.A Apply and monitor the ventilation management plan | MNCU1108A Apply and monitor the ventilation management plan | These units are not equivalent:  
  - PC deleted 1.3,  
  - PC 1.4 re-written as ‘Communicate roles, responsibilities and tasks’  
  - PC 1.6 re-written as ‘Determine individual training needs’  
  - Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment 
  New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria |
| MNC.U109.A Manage, operate and maintain the mine ventilation system | MNCU1109A Manage, operate and maintain the mine ventilation system | These Units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria |
| MNC.U111.A Establish the gas management plan | MNCU1111A Establish the gas management system | These units are not equivalent:  
  - Some new PC’s others adjusted  
  - New Element 5 and associated Performance Criteria “Plan and prepare for the implementation of the gas management plan” included  
  - Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment 
  New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria |
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<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
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<tr>
<td>MNC.U112.A Implement the gas management plan</td>
<td>MNCU1112A Implement the gas management plan</td>
<td>These units are not equivalent:</td>
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<td></td>
<td></td>
<td>• New Descriptor “This unit also covers the identification and monitoring of specific mine gas emissions, and identification of other factors which may affect gas drainage management according to the Gas Management Plan (and/or where applicable the Gas Drainage Management Plan.)</td>
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<tr>
<td></td>
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<td>• Some new PC’s others adjusted</td>
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<td>• Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment</td>
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<td>New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria</td>
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<tr>
<td>MNC.U113.A Apply and monitor the gas management plan</td>
<td>MNCU1113A Apply and monitor the gas management plan</td>
<td>These units are not equivalent:</td>
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<td></td>
<td></td>
<td>• New Descriptor “This unit also covers the identification and monitoring of specific mine gas emissions, and identification of other factors which may affect gas drainage management according to the Gas Management Plan (and/or where applicable the Gas Drainage Management Plan.) This unit also covers the identification and monitoring of potential gas outburst conditions, and identification of other factors which may affect outburst mining management according to the Outburst Mining Management Plan.”</td>
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<td></td>
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<td>• New PC’s and PC’s rewritten</td>
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<td>• Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment</td>
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<td>New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria</td>
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<tr>
<td>MNC.U116.A Establish the gas drainage plan</td>
<td>MNCU1116A Establish the gas drainage management plan</td>
<td>These units are not equivalent:</td>
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<td></td>
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<td>• New Element</td>
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<td></td>
<td>• New PC’s and PC’s rewritten and some deleted</td>
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<td>• Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment</td>
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<td>New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria</td>
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<td>Unit of Competency MNC04 V1</td>
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<tr>
<td>MNC.U117.A Implement the gas drainage management plan</td>
<td>MNCU1117A Implement the gas drainage management plan</td>
<td>linkages between the Range Statements and Performance Criteria</td>
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<td>These units are not equivalent:</td>
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<td>• New Element</td>
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<td>• New PC’s and PC’s rewritten and some deleted</td>
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<td>• Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment</td>
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<td>New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria</td>
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<tr>
<td>MNCU118A Apply and monitor gas drainage management plan</td>
<td>MNCU1118A Apply and monitor the gas drainage management plan</td>
<td>These units are equivalent, new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria</td>
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<tr>
<td>MNC.U121.A Establish the outburst management plan</td>
<td>MNCU1121A Establish the outburst management plan</td>
<td>These units are not equivalent:</td>
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<td>• New PC’s and PC’s rewritten and some deleted</td>
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<td>• Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment</td>
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<td>New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria</td>
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<tr>
<td>MNCU122A Implement the outburst management plan</td>
<td>MNCU1122A Implement the outburst management plan</td>
<td>These units are equivalent, new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria</td>
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<td>MNC.U123.A Apply and monitor the outburst management plan</td>
<td>MNCU1123A Apply and monitor the outburst management plan</td>
<td>These units are not equivalent:</td>
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<td>• New Element</td>
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<td>• New PC’s and PC’s rewritten and some deleted</td>
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<td>• Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment</td>
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<td>New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria</td>
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<td>New unit</td>
<td>MNCU1126A Establish the inrush management plan</td>
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<td>New unit</td>
<td>MNCU1127A Implement the inrush management plan</td>
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<tr>
<td>New unit</td>
<td>MNCU1128A Apply and monitor the inrush</td>
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<tr>
<td>Unit of Competency MNC98</td>
<td>Unit of Competency MNC04 V1</td>
<td>Changes</td>
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| MNC.U131.A Establish the mining method and strata management systems | MNCU1131A Establish the mining method and strata management systems | These units are not equivalent:  
  - New Element  
  - New PC’s and PC’s rewritten and some deleted  
  - Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment  
  New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria |
| MNC.U132.A Implement the strata management plan | MNCU1132A Implement strata management plan | These units are not equivalent:  
  - New Element  
  - New PC’s and PC’s rewritten and some deleted  
  - Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment  
  New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria |
| MNC.U133.A Apply and monitor the strata management plan | MNCU1133A Apply and monitor the strata management plan | These units are not equivalent:  
  - New Element  
  - New PC’s and PC’s rewritten and some deleted  
  - Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment  
  New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria |
| MNC.U136.A Establish the mine transport system and production equipment | MNCU1136A Establish mine transport systems and production equipment | These units are not equivalent:  
  - New Element  
  - New PC’s and PC’s rewritten and some deleted  
  - Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment  
  New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria |
| MNC.U137.A Implement mine transport systems and production equipment | MNCU1137A Implement mine transport systems and production equipment | These units are not equivalent:  
  - New Element  
  - New PC’s and PC’s rewritten and some deleted  
  - Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment  
  New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria |
### Unit of Competency MNC98 | Unit of Competency MNC04 V1 | Changes
--- | --- | ---
MNC.U138.A Apply and monitor mine transport system and production equipment | MNCU1138A Apply and monitor mine transport systems and production equipment | These units are not equivalent:
- New Element
- New PC’s and PC’s rewritten and some deleted
- Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment
- New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria

MNC.U141.A Establish the mine services systems | MNCU1141A Establish mine services and infrastructure systems | These units are not equivalent:
- New Elements
- New PC’s and PC’s rewritten and some deleted
- Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment
- New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria

MNC.U142.A Implement mine services systems | MNCU1142A Implement mine services and infrastructure systems | These units are not equivalent:
- New Elements
- New PC’s and PC’s rewritten and some deleted
- Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment
- New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria

MNC.U143.A Apply and monitor mine services system | MNCU1143A Apply and monitor mine services and infrastructure systems | These units are not equivalent:
- Element rewritten
- New PC’s and PC’s rewritten and some deleted
- Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment
- New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria
<table>
<thead>
<tr>
<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNC.U146.A  Establish mine fixed plant and infrastructure system</td>
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<td></td>
</tr>
<tr>
<td>MNC.U147.A  Implement mine fixed plant and infrastructure systems</td>
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<td></td>
</tr>
<tr>
<td>MNC.U148.A  Apply and monitor mine fixed plant and infrastructure system</td>
<td>Deleted</td>
<td></td>
</tr>
</tbody>
</table>
| MNC.U151.A  Establish mine emergency preparedness and response systems | MNCU1151A Establish mine emergency preparedness and response systems | These units are not equivalent:  
• New Elements and other Elements re-written  
• New PC’s and PC’s rewritten and some deleted  
• Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment  
New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria |
| MNC.U152.A  Implement mine emergency preparedness and response system | MNCU1152A Implement mine emergency management system | These units are not equivalent:  
• Element rewritten  
• New PC’s and PC’s rewritten and some deleted  
• Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment  
New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria |
| MNC.U153.A  Apply and monitor mine emergency preparedness and response systems | MNCU1153A Apply and monitor mine emergency preparedness and response systems | These units are not equivalent:  
• New PC’s and PC’s rewritten and some deleted  
• Adjustments made to Critical Aspects of Evidence, Range Statement, Required Knowledge, Required Skills and Methods of Assessment  
New template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria |
| New unit | MNCU1155A Establish an underground mine mechanical plant management system | |
| New unit | MNCU1156A Implement the underground mine mechanical plant management plan | |
## Open Cut Units

<table>
<thead>
<tr>
<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNC.O09.A Perform basic earthmoving operations</td>
<td>Delete</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O10.A Conduct dragline operations</td>
<td>MNCO1010A Conduct dragline operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O11.A Conduct burden and coal drilling operations</td>
<td>MNCO1011A Conduct burden and coal drilling operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O12.A Conduct rope shovel operations</td>
<td>MNCO1012A Conduct rope shovel operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O13.A Conduct front end loader operations</td>
<td>MNCO1013A Conduct front end loader operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O14.A Conduct haul truck operations</td>
<td>MNCO1014A Conduct haul truck operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O15.A Conduct bulk water truck operations</td>
<td>MNCO1015A Conduct bulk water truck operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O16.A Conduct grader operations</td>
<td>MNCO1016A Conduct grader operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O17.A Conduct scraper operations</td>
<td>MNCO1017A Conduct scraper operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O18.A Conduct dozer operations</td>
<td>MNCO1018A Conduct dozer operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O19.A Conduct surface miner operations</td>
<td>MNCO1019A Conduct surface miner operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>Unit of Competency MNC98</td>
<td>Unit of Competency MNC04 V1</td>
<td>Changes</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>MNC.O20.A Conduct auger miner operations</td>
<td>MNCO1020A Conduct auger miner operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O21.A Conduct bucketwheel operations</td>
<td>MNCO1021A Conduct bucketwheel operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O22.A Conduct spreader operations</td>
<td>MNCO1022A Conduct spreader operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O23.A Support bucketwheel system operations</td>
<td>MNCO1023A Support bucketwheel system operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O24.A New unit</td>
<td>MNCO1024A Conduct wheeled dozer operations</td>
<td>These units are equivalent other than:</td>
</tr>
<tr>
<td>MNC.O25.A Lay and recover cables and hoses</td>
<td>MNCO1025A Lay and recover cables and hoses</td>
<td>The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied.</td>
</tr>
<tr>
<td>MNC.O26.A Conduct dewatering operations</td>
<td>MNCO1026A Conduct dewatering operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O27.A Conduct excavator hydraulic/shovel operations</td>
<td>MNCO1027A Conduct hydraulic shovel/excavator operations</td>
<td>These units are equivalent other than:</td>
</tr>
<tr>
<td>MNC.O28.A Conduct conveyor operations</td>
<td>MNCO1028A Conduct conveyor operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O28.A Conduct mobile slew conveyor operations</td>
<td>MNCO1029A Conduct mobile slew conveyor operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>Unit of Competency MNC98</td>
<td>Unit of Competency MNC04 V1</td>
<td>Changes</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-----------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>MNC.O30.A Conduct control centre operations</td>
<td>MNCO1030A Conduct control centre operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O31.A Coordinate conveyor system shift</td>
<td>MNCO1031A Coordinate conveyor system shift</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O32.A Isolate and access plant</td>
<td>MNCO1032A Isolate and access plant</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.O33.A Conduct conveyor shifting dozer operations</td>
<td>MNCO1033A Conduct conveyor shifting dozer operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
</tbody>
</table>
| MNC.O34.A Conduct conveyor-car high wall mining operations | MNCG1069A Conduct conveyor-car high wall mining operations | These units are equivalent other than:  
- PC 1.8 “Comply with site environmental requirements” has been deleted  
- PC 3.5 “Add reagents to approved operating parameters” has been deleted  
- PC 3.7 “Complete all required documentation clearly, concisely and on time” has been deleted  
- PC 3.8 “Pass on end of shift information to oncoming shift or next shift” has been deleted  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
| MNC.O35.A Provide deck support for conveyor-car high wall mining operations | MNCG1070A Provide deck support for conveyor-car high wall mining operations | These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.                                      |
| MNC.P10.A Conduct mobile crushing and screening plant operations | MNCO1036A Conduct mobile crushing and screening plant operations | These units are equivalent other than:  
- PC 1.8 “Comply with site environmental requirements” has been deleted  
- PC 3.5 “Add reagents to approved operating parameters” has been deleted  
- PC 3.7 “Complete all required documentation clearly, concisely and on time” has been deleted  
- PC 3.8 “Pass on end of shift information to oncoming shift or next shift” has been deleted  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
<table>
<thead>
<tr>
<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
</tr>
</thead>
</table>
| MNC.O40.A               | MNCO1040A                   | These units are equivalent other than:  
  - PC 2.4 “Identify and dispose of any deteriorated explosives and accessories as per legislative, manufacturers’ and site requirements” has been added  
  - The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
| MNC.O41.A               | MNCO1041A                   | These units are equivalent other than:  
  - PC 2.3 “Identify and report deteriorated explosives and accessories as per legislation, manufacturers and site requirements” has been added  
  - The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
| MNC.O42.A               | MNCO1042A                   | These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria. |
| MNC.O43.A               | MNCO1043A                   | These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria. |
| MNC.O44.A               | MNCO1044A                   | These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria. |
| MNC.O45.A               | MNCO1045A                   | These units are not equivalent:  
  - Unit description changed to “This unit covers the application and monitoring of environmental plans in a surface mine”  
  - PC’s rewritten  
  - PC’s deleted  
  - Element rewritten  
  - The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
| MNC.O46.A               | MNCO1046A                   | These units are not equivalent:  
  - PC’s rewritten  
  - Element rewritten  
  - The new template format, conversion to active voice, and
<table>
<thead>
<tr>
<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>New unit</td>
<td>MNCO1047A</td>
<td>Manage the interaction of light and heavy vehicles and mining equipment</td>
</tr>
<tr>
<td>MNQQM07A Plan pit development</td>
<td>MNCO1101A Plan pit development</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNQQM05A Implement pit plan</td>
<td>MNCO1102A Implement pit plan</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNQTL05A Implement pit development, monitor and report</td>
<td>MNCO1103A Apply pit plan</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNIC06A Establish the mine water management system</td>
<td>MNCO1105A Establish the mine water management system</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>New unit</td>
<td>MNCO1106A</td>
<td>Implement the site water management plan</td>
</tr>
<tr>
<td>New unit</td>
<td>MNCO1107A</td>
<td>Apply and monitor the site water management plan</td>
</tr>
<tr>
<td>MNIC07A Establish the stockpile management system</td>
<td>MNCO1110A Establish the mine stockpile management system</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>New unit</td>
<td>MNCO1111A</td>
<td>Implement the stockpile management plan</td>
</tr>
<tr>
<td>New unit</td>
<td>MNCO1112A</td>
<td>Apply and monitor the site stockpile management plan</td>
</tr>
<tr>
<td>New Unit</td>
<td>MNCO1115A</td>
<td>Apply and monitor surface mine emergency preparedness and response procedures</td>
</tr>
<tr>
<td>New unit</td>
<td>MNCO1116A</td>
<td>Implement mine plant and resource management plan</td>
</tr>
<tr>
<td>New unit</td>
<td>MNCO1117A</td>
<td>Apply and monitor site plant and resource management plan</td>
</tr>
</tbody>
</table>

Improved linkages between the Range Statements and Performance Criteria have also been applied.
<table>
<thead>
<tr>
<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>New unit</td>
<td>MNCO1118A Supervise coal processing operations</td>
<td>These units are not equivalent:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• New Element added</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied</td>
</tr>
<tr>
<td>MNIC08A</td>
<td>MNCO1120A Establish waste and by-product management system</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>New unit</td>
<td>MNCO1121A Implement site waste and by-product management plan</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>New unit</td>
<td>MNCO1122A Apply and monitor site waste and by-products management plan</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNIC05A</td>
<td>MNCO1125A Establish plant, equipment and infrastructure maintenance system</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>New unit</td>
<td>MNCO1126A Implement and maintain the site plant, equipment and infrastructure maintenance plan</td>
<td></td>
</tr>
<tr>
<td>New unit</td>
<td>MNCO1127A Apply and monitor site plant, equipment and infrastructure maintenance management plan</td>
<td></td>
</tr>
<tr>
<td>MNIC04A</td>
<td>MNCO1130A Establish mine services system</td>
<td>These units are not equivalent:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• New Element added</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied</td>
</tr>
<tr>
<td>New unit</td>
<td>MNCO1131A Implement mine services systems</td>
<td></td>
</tr>
<tr>
<td>MNIS01A</td>
<td>MNCO1135A Establish ground control and slope stability system</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNIC03A</td>
<td>MNCO1140A Establish the mine infrastructure and fixed plant systems</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>New unit</td>
<td>MNCO1142A Implement mine fixed plant and infrastructure systems</td>
<td></td>
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</table>
## MNC04 Coal Training Package – Competency Standards

<table>
<thead>
<tr>
<th>Unit of Competency MNC98</th>
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<th>Changes</th>
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<tbody>
<tr>
<td>New unit</td>
<td>MNC01145A</td>
<td>Establish a surface mine mechanical plant management system</td>
</tr>
<tr>
<td></td>
<td>MNC01146A</td>
<td>Implement the surface mine mechanical plant management plan</td>
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</table>

### Coal Preparation Units

<table>
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<tr>
<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNC.P1.A Handle raw coal</td>
<td>MNC01001A Handle raw coal</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.P2.A Monitor coal preparation plant operations</td>
<td>MNC01002A Monitor coal preparation plant operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.P3.A Control coal preparation plant operations</td>
<td>MNC01003A Control coal preparation plant operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.P4.A Treat and dispose of rejects and tailings</td>
<td>MNC01004A Treat and dispose of rejects and tailings</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.P5.A Conduct sampling operations</td>
<td>MNC01005A Conduct sampling operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
</tbody>
</table>
| MNC.P6.A Conduct stockpile dozer operations | MNC01006A Conduct stockpile dozer operations | These units are equivalent other than:  
- Performance Criterion 4.4 “Provide operator support during preparation for, and conduct of, major maintenance tasks in accordance with site requirements” has been deleted  
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied |
<p>| MNC.P7.A Conduct stockpile reclaimer operations | MNC01007A Conduct stockpile reclaimer operations | These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria. |</p>
<table>
<thead>
<tr>
<th>Unit of Competency MNC98</th>
<th>Unit of Competency MNC04 V1</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNC.P8.A Conduct rail dispatch operations</td>
<td>MNCP1008A Conduct rail dispatch operations</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
<tr>
<td>MNC.P9.A Perform plant operational maintenance</td>
<td>MNCP1009A Perform plant operational maintenance</td>
<td>These units are equivalent other than the new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria.</td>
</tr>
</tbody>
</table>
| MNC.P10.A Conduct mobile crushing and screening plant operations | MNCO1036A Conduct mobile crushing and screening plant operations | These units are equivalent other than:       
- PC 1.8 “Comply with site environmental requirements” has been deleted       
- PC 3.5 “Add reagents to approved operating parameters” has been deleted       
- PC 3.7 “Complete all required documentation clearly, concisely and on time” has been deleted       
- PC 3.8 “Pass on end of shift information to oncoming shift or next shift” has been deleted       
The new template format, conversion to active voice, and improved linkages between the Range Statements and Performance Criteria have also been applied. |
### Appendix 3: Mapping Units of Competency in Qualifications

#### CORE UNITS

<table>
<thead>
<tr>
<th>Old Code</th>
<th>New Code</th>
<th>Title</th>
<th>Surface Coal Mining Qualifications</th>
<th>Coal Preparation</th>
<th>Underground Coal Mining Qualifications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>III IV V VI</td>
<td>II III IV V VI</td>
<td></td>
<td></td>
<td></td>
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#### GENERAL OPERATOR UNITS

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### GENERAL OPERATOR UNITS

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split into 2 units
<p>| MNC.G39.A | MNCG1032B | Remove, repair and refit tyres and tubes             | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| New unit  | MNCG1033A | Conduct lifting operations                           | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G35.A | MNCG1035A | Apply operational maintenance skills                 | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| 1034 reserved |         |                                                     |    |     |    |     |    |    |    |    |     |    |     |    |    |    |
| MNC.G36.A | MNCG1036A | Provide support to electrical tradesperson           | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G37.A | MNCG1037A | Service mine plant and equipment                     | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G38.A | MNCG1038A | Perform basic cutting and welding                    | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| 1039 reserved |         |                                                     |    |     |    |     |    |    |    |    |     |    |     |    |    |    |
| MNC.G40.A | MNCG1040A | Operate gantry crane                                 | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G41.A | MNCG1041A | Conduct non-slewing crane operations                 | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G42.A | MNCG1042A | Conduct slewing crane operations                     | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G43.A | MNCG1043A | Conduct dogging operations                           | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G44.A | MNCG1044A | Conduct basic rigging operations                     | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G45.A | MNCG1045A | Conduct intermediate rigging operations              | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G46.A | MNCG1046A | Conduct basic scaffolding operations                 | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G47.A | MNCG1047A | Conduct intermediate scaffolding operations          | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G48.A | MNCG1048A | Conduct forklift operations                          | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G49.A | MNCG1049A | Operate elevating work platform                      | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G50.A | MNCG1050A | Operate vehicle loading crane                        | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
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| MNC.G55.A | MNCG1055A | Extend, retract and maintain conveyor componentary  | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G56.A | MNCG1056A | Install, commission and maintain major conveyor equipment and systems | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G57.A | MNCG1057A | Repair and splice conveyor belting                   | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
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| MNC.G60.A | MNCG1060A | Operate support equipment                            | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G61.A | MNCG1061A | Operate light vehicle                                | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G62.A | MNCG1062A | Operate medium vehicle                               | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G63.A | MNCG1063A | Operate heavy rigid vehicle                          | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |
| MNC.G64.A | MNCG1064A | Operate articulated vehicle                          | E  | E   |    |     |    |    |    | E  | E   |    |     |    |    |    |</p>
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**Surface Coal Mining Qualifications**
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## Underground Technical Management Units

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<td>BSBMGT601A Contribute to strategic direction</td>
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<td>Determine suitable sources of information for the creation of new spatial data sets</td>
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<td>Plan data collection and validation</td>
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<td>PRDSIS16A</td>
<td>Store and retrieve spatial data</td>
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<td>Produce project deliverables</td>
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MNCC1001B  Work safely

Unit Descriptor
This unit covers essential competencies and activities required to satisfy safe work practices.

Units Replaced
This unit replaces the following units:
- MNC.C1.A Work safely.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

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<td>Access and identify the site safety procedures.</td>
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<tr>
<td>1.1</td>
<td>Access, understand and apply site safety information, rules and procedures to the particular work situation.</td>
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<td>1.2</td>
<td>Carry out isolation of energy sources and immobilisation of potential energy sources, including tagging, in accordance with authorised and/or site procedures.</td>
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<td>Locate destinations within the mine site by interpreting and applying mine plans, mine transport rules and appropriate signage.</td>
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<td>Identify, act on and report breaches in mine safety in accordance with site procedures.</td>
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<td>Apply personal safety measures.</td>
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<tr>
<td>2.1</td>
<td>Use personal protective equipment in accordance with site procedures.</td>
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<td>2.2</td>
<td>Establish and maintain safe working areas in accordance with site procedures.</td>
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<td>2.3</td>
<td>Obtain permits and clearances in accordance with site procedures, before specialised work is carried out.</td>
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<td>2.4</td>
<td>Follow safe manual handling procedures in accordance with authorised codes of practice and/or site procedures.</td>
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<td>Apply operational safety measures.</td>
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<td>3.1</td>
<td>Recognise and respond to alarms in accordance with site procedures.</td>
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<td>3.2</td>
<td>Identify and clarify own responsibility in regard to emergency situation procedures and respond to and report emergency situations in accordance with site procedures.</td>
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</table>
3.3 Apply basic fire fighting techniques in accordance with site requirements.

3.4 Demonstrate familiarity with the *emergency escape route(s)* and procedures in accordance with site requirements.

4 Maintain personal well-being for job.

4.1 Identify *risks* to personal well-being and recognise preventative strategies to minimise impact on site.

4.2 Identify, act on and report situations which may endanger the individual or others.

4.3 Access and explain site requirements for *fitness for duty*.

5 Identify and report incidents.

5.1 Understand site incident and injury statistics.

5.2 Report and record incidents and injuries in accordance with site procedures.

5.3 Contribute to and participate in incident investigations in accordance with the responsibilities and protection under the relevant legislation.

**RANGE STATEMENT**

The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

**Safety information** and procedures may be contained in:
- legislation and regulations
- relevant Australian standards
- management plans
- OH&S policy
- codes of practice
- manufacturer instructions
- safe working procedures (or equivalent).

**Personal protective equipment** may include:
- hard hats
- hearing protection
- eye protection
- safety boots
- respiratory protection
- self rescuers
- other prescribed clothing and equipment.

**Permits** and clearances may include:
- access to areas
• welding and cutting
• powerline clearances
• start-up procedures
• blasting/shotfiring.

Self rescuers may include filter or self contained types.

Manual handling may include the use of mechanical handling aids which are present at the mine and included in the National Standard for Manual Handling and National Code of Practice for Manual Handling (NOHSC).

Emergency escape route(s) are those identified at the mine and may include the primary and secondary escape route(s).

Risks to personal well-being may include:
• non adherence to safety procedures/policies
• stress
• communicable diseases
• adverse personal hygiene
• horseplay.

Fitness for duty may include:
• smoking restrictions
• alcohol impairment
• improper use of drugs
• fatigue management
• physiological and psychological stress
• medication register.

Emergency situations may include:
• emergency evacuation
• fire
• incident or injury
• electrical shock
• falls
• entrapment
• inrush
• fumes
• explosions.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
• knowledge of procedures, requirements and instructions to work safely on a mine site;
• implementation of appropriate procedures and techniques for efficient and effective safe work on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. accessing and interpreting mine safety procedures
  b. accessing and interpreting the chemical substance information system
  c. applying personal protective equipment requirements
  d. identifying warnings/alarms and their meanings
  e. applying emergency evacuation procedures
  f. applying tagging/lock-out procedures
  g. identifying and travelling to locations in the mine
  h. applying basic fire fighting techniques
  i. applying site traffic rules
  j. identifying and reporting of incidents.

**Required Knowledge**
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
  • site and equipment safety systems/rules/procedures
  • chemical substance information systems
  • basic geological conditions at the mine
  • current mine layout and plan
  • site authorisation procedures
  • personal safety measures
  • basic fire fighting
  • isolation procedures
  • permit and clearance procedures
  • personal fitness awareness
  • manual handling procedures
  • warning and directional signals
  • incident reporting systems and procedures.

**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
  • access, interpret and apply relevant safety rules and procedures
  • apply basic fire fighting techniques
  • navigate within the mine site
  • prepare and process reports.

**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. E.g., language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:
- simulation/scenario analysis
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCC1005A  Comply with site work systems/procedures

Unit Descriptor
This unit covers the mine worker’s contribution to planning, preparation and application of site safety and other management systems.

Units Replaced
This unit replaces the following units:
• MNC.C5.A Contribute to quality work outcomes.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT          PERFORMANCE CRITERIA
1  Plan and prepare for quality outcomes.  1.1 Access, interpret and clarify relevant work procedures.
1.2 Identify and agree on roles and responsibilities for individual work with the appropriate persons.
1.3 Prepare work plans that will facilitate the achievement of mine procedures and designated work outcomes.

2  Apply work procedures to individual work activities.  2.1 Carry out allocated work to site procedures.
2.2 Adjust and agree on roles and responsibilities to meet changing circumstances with appropriate person.
2.3 Monitor work processes, report incidents and apply local risk control processes to minimise loss and damage incidents.
2.4 Identify and report non conformance in the application of site procedures and recommend improvements to relevant people.
2.5 Complete relevant documentation in accordance with site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Relevant work procedures may include:
• relevant legislation
• relevant Australian Standards
• company or site policies, procedures and work instructions
• site management plans
• codes of practice, recognised standards or guidelines
• manufacturer instructions.
Roles and responsibilities may include:

- time parameters
- productivity parameters
- quality parameters
- cost parameters
- time targets for own work
- criteria for evaluation of own work
- measures to avoid wastage
- criteria for measurement of internal and external customer satisfaction
- processes to ensure “right first time” approach.

**Work plans** is the plan of routine or non-routine activities which may not be documented.

**Relevant documentation** may include:

- daily production reports
- specific product or process reports or records.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**

The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of all procedures, requirements and instructions to apply site work systems/procedures on a mine site;
- implementation of appropriate procedures and techniques for the efficient and effective application of site work systems/procedures on a mine site, while complying with site risk control, safety, environmental and communication requirements. This will include:
  a. accessing, identifying and applying site procedures
  b. identifying, agreeing and adjusting performance indicators to the circumstances
  c. planning and completing work to agreed quality outcomes
  d. monitoring processes, reporting incidents and applying risk control processes to minimise loss and damage
  e. contributing to the improvement of the site safety system
  f. completing required documentation.

**Required Knowledge**

Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- site safety systems
- work planning processes
- site and equipment safety requirement
- technical and operational capability and limitations of resources and equipment being used.
Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- access, interpret and apply site procedures
- communicate in the workplace
- monitor and recommend changes to overcome non conformance with site procedures
- maintain relevant site documents
- work wearing personal protective equipment.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant, eg language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- simulation/scenario analysis
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.
Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCC1006B  Conduct local risk assessment

Unit Descriptor
This unit covers the skills and knowledge required to apply basic risk control processes at a mine site. It includes the identification of hazards; assessing risk; identifying unacceptable risk; identifying/analysing and implementing risk treatment; and completing records and reports.

Units Replaced:
This unit replaces the following units:
• MNC.CO6.A Apply local risk control processes

Links outside this unit:
The work covered in this unit relates to the Australian Standard AS/NZS 4360:1999 Risk Management. The work described in this unit is equivalent to MNQMNI200A Conduct local risk control.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT                      PERFORMANCE CRITERIA
1 Identify hazards.             1.1 Analyse work area conditions to identify/recognise potential hazards in the workplace.
                                1.2 Access and analyse relevant safety systems information to eliminate situations covered by existing and adequate procedures.
                                1.3 Recognise the type and scope of unresolved hazards and their likely impact.

2 Assess risk and identify unacceptable risk. 2.1 Evaluate and determine consequence if the event should occur.
                                              2.2 Consider and determine likelihood of the event.
                                              2.3 Identify criteria for the acceptability/unacceptability of the risk or source from the appropriate party.
                                              2.4 Evaluate risk against criteria to identify if it warrants ‘unacceptable risk’ status and either action or refer to the appropriate party.
                                              2.5 Risk level (likelihood and consequence combined) is considered and determined.

3 Identify, analyse and implement risk treatments. 3.1 Identify and consider all possible risk treatment options.
                                                      3.2 Identify feasible options by preliminary analysis and consideration of possible options.
3.3 Analyse feasible options, including the identification of resource requirements.
3.4 Select most appropriate action for dealing with the situation.
3.5 Plan and prepare the course of action in detail and acquire/obtain required resources.
3.6 Implement the course of action.

4. Complete records and reports.
   4.1 Communicate information on the course of action and implementation to the relevant people.
   4.2 Complete records and reports for hazards and actions from personal risk assessment as specified by legislative and site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Risk is defined as: the chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood (definition from AS/NZS 4360:1999 Risk Management).

Hazard is defined as: a source of potential harm or a situation with a potential to cause loss (definition from AS/NZS 4360:1999 Risk Management).

Risk treatment is defined as: selection and implementation of appropriate options for dealing with risk (definition from AS/NZS 4360:1999 Risk Management).

Hazards may include:
• equipment
• methods / plans
• people
• the work environment

Consequence is defined as: the outcome of an event or situation expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain (definition from AS/NZS 4360:1999 Risk Management).

Frequency is defined as: a measure of likelihood expressed as the number of occurrences of an event in a given time.

Likelihood is used as: a qualitative description of probability and frequency (definition from AS/NZS 4360:1999 Risk Management).
Probability is defined as: the likelihood of a specific outcome, measured by the ratio of specific outcomes to the total number of possible outcomes. Probability is expressed as a number between 0 and 1, with 0 indicating an impossible outcome and 1 indicating an outcome is certain (definition from AS/NZS 4360:1999 Risk Management).

Criteria for the acceptability/unacceptability of the risk must be determined by the organisation’s internal policy, goals and/ or objectives in reference to relevant legislation.

Risk treatment options may include:
- eliminating the hazard
- substitution
- engineering controls
- administrative controls (procedures, etc.)
- personal protective equipment.

Records and reports may include:
- hazard reporting forms
- supervisor/deputy/OCE reports
- incident reports
- near miss reports
- shift reports.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of legislative requirements; potential hazards, risks and risk control measures; safety and emergency procedures, measures, and systems used at the mine site
- implementation of mine site risk control procedures, measures and systems in a mine site operation, while complying with site safety, environmental, quality and communication requirements. This will include:
  a. identifying hazards
  b. assessing risk and identifying unacceptable risk
  c. identifying, analysing and implementing actions/controls
  d. completing records and reports.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- Risk Management process and methods, including identifying hazards; assessing risks; determining acceptability of risks; identifying controls
- mine site risk management procedures
- mine site safety systems information
- mine site communication, reporting and recording procedures.
**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
- proactively identify hazards
- take action in response to risks.

**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair, flexible and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:
- simulation/scenario analysis
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCC1007A Communicate in the workplace

Unit Descriptor
This unit covers the identification, access and use of communication systems by an individual on a mine site.

Units Replaced
This unit replaces the following unit:
- MNC.C7.A Apply mine communication systems.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT PERFORMANCE CRITERIA
1 Identify and access mine communication equipment and systems.
1.1 Identify and access mine communication system components.
1.2 Establish and maintain communication within the mine in accordance with relevant legislative requirements and site procedures.
1.3 Access and apply safety requirements related to communication equipment and systems throughout the operations.

2 Communicate using mine equipment and systems.
2.1 Identify and select for use the most appropriate method of communication.
2.2 Operate or use communication equipment and systems in accordance with manufacturer and site requirements.
2.3 Acknowledge and respond to communication or take, confirm and pass on promptly to the appropriate person.
2.4 Pass communications in a clear and concise manner and in accordance with mine procedures.
2.5 Follow emergency procedures, including the passing of reports, and observe rules of communication during an emergency.
2.5 Identify and report faults in communication equipment in accordance with site procedures.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.
Communication system may include:
- the systems overview
- operating directories
- communication equipment
- site specific procedures and constraints.

Communications may be by:
- radio
- telephone
- computer
- lights
- audible singles (bells, whistles and sirens)
- physical signals (lamps and flags)
- written and
- verbal.

Site procedures may contain:
- legislation and regulations
- relevant Australian Standards
- management plans
- OH&S policy
- codes of practice
- manufacturer instructions
- safe working procedures or equivalent including:
  - call signs
  - area descriptions
  - voice procedures
  - protocols.

Safety requirements may include:
- avoidance of energy sources
- care of equipment and wiring
- compliance with hazardous zones procedures.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to apply appropriate communication systems, communication methods, site procedures and safety procedures used at the mine-site
- implementation of appropriate procedures and techniques for the efficient and effective communication on a mine site, while complying with site safety, environmental, quality and communication requirements. This will include:
  a. identifying and accessing mine communication equipment and systems
b. communicating using mine equipment and systems.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- current relevant legislative requirements, Standards and site procedures
- types of mine communications equipment and systems and their applications
- mine communication system components
- operational procedures and safety requirements of communication equipment and systems
- efficiently and effectively confirming and passing on information in a clear and prompt manner
- identification and reporting of equipment and system faults.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- select and operate the most appropriate method of communication
- communicate in a effective and prompt manner.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair, flexible and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.
Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- simulation/scenario analysis
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1000A  Conduct mine surveying operations

Unit Descriptor
This unit covers mine surveying operations in underground and open cut mines.

Units Replaced
This unit replaces the following unit:
- MNCG10A Conduct mine surveying operations.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Plan and prepare for survey operations.</td>
</tr>
<tr>
<td>1.1</td>
<td>Schedule key activities and time lines.</td>
</tr>
<tr>
<td>1.2</td>
<td>Identify stakeholders and organise activities in consultation according to organisation’s guidelines.</td>
</tr>
<tr>
<td>1.3</td>
<td>Plan survey work with due consideration to relevant technical and legislative requirements.</td>
</tr>
<tr>
<td>1.4</td>
<td>Conduct work according to site procedures, regulations, OHS, other relevant legislation, manufacturer specifications.</td>
</tr>
<tr>
<td>1.5</td>
<td>Identify, manage and report potential risks and hazards according to site procedures.</td>
</tr>
<tr>
<td>1.6</td>
<td>Select and use personal protective equipment.</td>
</tr>
<tr>
<td>1.7</td>
<td>Adhere to emergency procedures.</td>
</tr>
<tr>
<td>2</td>
<td>Gather data.</td>
</tr>
<tr>
<td>2.1</td>
<td>Operate equipment to gather spatial data according to manufacturer specification, legislative and organisation guidelines.</td>
</tr>
<tr>
<td>2.2</td>
<td>Correctly measure identified spatial components.</td>
</tr>
<tr>
<td>2.3</td>
<td>Validate and record measurements in accordance with legislative and project specifications.</td>
</tr>
<tr>
<td>2.4</td>
<td>Reduce measured spatial data to project spatial reference system for comparison against design parameters as required.</td>
</tr>
<tr>
<td>2.5</td>
<td>Identify inconsistencies in information by verification and recording them.</td>
</tr>
<tr>
<td>2.6</td>
<td>Determine uses and limitations of base data.</td>
</tr>
<tr>
<td>3</td>
<td>Organise and process data.</td>
</tr>
<tr>
<td>3.1</td>
<td>Identify the outcomes and elements of systems, and design and develop systems standards and integrate into data management quality programs.</td>
</tr>
</tbody>
</table>
3.2 Verify the integrity of base *spatial and textual data* and process and store those data to achieve specific outcomes.

3.3 Verify the integrity of processed data.

3.5 Select appropriate database and collate relevant spatial and textual data in one system for transfer and integration into other systems as required.

3.5 Convert and transfer data between systems and media, employing appropriate technology and procedures.

3.6 Administer databases by applying effective procedures and systems for the manipulation of information, and the security and maintenance of data.

4 Analyse, evaluate and interpret data.

4.1 Apply systems to analyse spatial data and information.

4.2 Determine the required accuracy and reliability of spatial data and information.

4.3 Interpret data to ensure that they are relevant to client/stakeholder needs.

4.4 Enhance or add value to data, where required, to increase the quality and usability of data.

4.5 Collate and relate data to specific areas of operations.

5 Assemble data.

5.1 Identify, clarify and satisfy stakeholder and operations personnel spatial data requirements.

5.2 Create specific information from a number of databases to meet the needs of clients or legislation.

5.3 Assemble data into useful sets of information using relevant *technology and procedures*.

5.4 Compile and produce maps, plans and charts.

5.5 Format data according to *legislative* and organisational standards and needs.

6 Compile and produce survey records.

6.1 Determine the application/uses and limitations of base spatial data.

6.2 Maintain records of original survey (raw) data such as field books and data input files.

6.3 Identify, select and apply available *techniques and technology* best suited to present graphical and photographic records to meet client needs.
6.4 Transfer spatial data between various media to provide consolidated digital spatial information, ensuring the accuracy and reliability and maximum potential of the data.

6.5 Integrate spatial data with other information to provide consolidated digital spatial information, ensuring the accuracy and reliability and maximum potential of the data.

6.6 Create models of nature or cultural entities and phenomena.

6.7 Create model files and integrate with other data.

6.8 Transfer model files between various media.

7 Complete and present documentation.

7.1 Record data according to accepted industry and legislative standards.

7.2 Resolve omissions and gaps in spatial data.

7.3 Complete promptly and accurately all required documentation according to legislative and organisational requirements.

7.4 Store all documentation according to legislative and organisational requirements.

7.5 Prepare information and reports in a format and detail appropriate to the client/stakeholder and employ appropriate communication and display techniques to present information and reports.

7.6 Apply effective validation procedures to verify the accuracy and reliability of data which are to be certified.

7.7 Certify and sign-off data and information to meet legislative and company/site requirements.

8 Maintain survey equipment.

8.1 Check survey instruments and ensure accuracy and performance in accordance with site practices, legislation and manufacturer instructions.

8.2 Calibrate survey instruments to ensure correct and accurate measurements in accordance with site practices, legislation and manufacturer instructions.

8.3 Ensure safe storage and transport of equipment and survey instruments in accordance with site practices and legislation.

8.4 Maintain equipment and survey instrument condition and cleanliness.
RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Stakeholders may include:
- clients
- client representatives
- government authorities
- community groups
- geologists
- engineers
- architects/cartographers
- operators
- supervisors
- contractors
- environmentalists/ecologists.

Legislation may include:
- industry codes, regulations, standards and guidelines
- environmental legislation
- health and safety legislation
- mining tenure regulations
- third tier of legislation
- surveying legislation
- cultural and heritage legislation.

Spatial components may include:
- position
- dimension
- height
- direction
- depth
- slope
- volume
- stratum.

Measurements may be made with:
- theodolite
- EDM
- GPS
- tape
- level
- photogrammetry
- remote sensing
- tide gauge
- current meter
• echo sounder (seismic)
• laser scanner
• borehole camera.

**Design** may be represented by:
• hard copy plans or maps
• digital plans or maps.

**Spatial and textual data** may include:
• coordinates
• AMG
• lats/longs
• grid systems
• local grid systems.

**Technology and procedures** may include:
• proven industry standard calculation procedures
• hand held calculators, computer software applications
• direct instrument download hardware and software applications
• GPS
• data recorders
• text data management procedures.

**Plans** may include:
• policies and procedures relevant to legislation, health and safety or environment,
• documentation and records
• regulatory and legal compliance
• hazard plan
• colliery development plan
• firefighting plan
• stone dust plan
• emergency evacuation plan
• gas drainage plan
• ventilation plan
• risk zone management plan
• Survey Memo/Work Instruction.

**Techniques and technology** may include:
• computer generated DTM Modelling
• CAD dxf format files
• media including:
  - plan – paper hardcopies
  - CAD files (dxf)
  - GIS files
  - via email - PDF format, dxf files.
Models may include:
- physical representation, at a different scale, of a real thing
- physical models
- computer generated models
- virtual models
- digital models
- dynamic models.

Information and reports may include:
- plans, maps
- digital display
- written reports
- historical data
- graphs, models
- formulae.

Communication and display techniques may include:
- plans, maps
- Powerpoint display
- written reports.

Survey instruments may include:
- GPS
- electronic theodolite
- microptic theodolites
- levels
- alignment lasers
- photogrammetric instruments
- laser scanners.

Equipment may include:
- transport vehicle
- tripods
- prisms
- survey accessories
- field books and data recorders.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to conduct mine surveying operations on a mine site
implementation of appropriate procedures and techniques for the efficient and effective mine surveying operations on a mine site, while complying with site safety, environmental, quality and communication requirements. This will include:

a. conducting an activity safely and efficiently
b. achieving quality and production targets
c. understanding and adhering to relevant legislative requirements and mine manager’s rules
d. understanding and adhering to environmental and heritage issues
e. applying effective validation procedures to verify accuracy and reliability of data
f. certification of data.

**Required Knowledge**
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- measurement techniques
- accuracy and precision requirements
- limitations of equipment, measuring and analysis guidelines
- map reading and spatial comprehension
- site geography and geology
- mine operations in their workplace
- cartographic principles
- surveying techniques
- survey equipment
- survey equipment care and maintenance
- project reporting guidelines
- spatial reference systems
- spatial data reduction and manipulation techniques
- GIS principles and techniques
- risk management principles
- company organisation
- work role definitions
- reporting methods and alternatives
- relevant standards, licences and permits
- safe work practices
- emergency procedures and obligations
- community expectations
- consultative strategies
- alternative documentation systems for procedures
- environmental issues.

**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- show responsibility/motivation
- consult with stakeholders and others
- apply risk management practices
- investigate
- communicate effectively
- follow instructions
- plan strategically
- exercise professional judgement
- show attention to detail
- interpret data/information
- perform under adverse conditions
- observe effectively
- manage policy effectively
- apply interpersonal skills
- liaise with other parties
- coordinate others
- manage information
- solve problems
- analyse data/information
- use surveying equipment
- write clear reports
- facilitate meetings.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair, flexible and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- simulation/scenario analysis
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1001A  Apply risk management processes

Unit Descriptor
This unit covers the application of the processes and tasks to conduct inspections and to identify, analyse, assess risks, recommend treatment, contribute to implementation of treatments and to monitor risks. It also covers participation in the preparation, testing and documentation of site working instructions or equivalent.

This unit has been extensively revised in accordance with the Queensland Mining S1 unit of competency.

Units Replaced
This unit replaces the following unit:
• MNC.G1.A Develop and implement risk control processes.

Links outside this unit:
The work described in this unit is equivalent to MNQMNI300A Apply risk management processes

The work covered in this unit relates to the Australian Standard AS/NZS 4360:1999 Risk Management.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Identify hazards.</td>
</tr>
<tr>
<td>1.1</td>
<td>Inspect and analyse work area conditions regularly and systematically to identify/recognise potential hazards.</td>
</tr>
<tr>
<td>1.2</td>
<td>Access and analyse relevant mine safety systems information to eliminate situations covered by existing and adequate procedures.</td>
</tr>
<tr>
<td>1.3</td>
<td>Recognise the type and scope of unresolved hazards and their likely impact.</td>
</tr>
<tr>
<td>2</td>
<td>Assess and identify unacceptable risk.</td>
</tr>
<tr>
<td>2.1</td>
<td>Consider and determine the likelihood of the event happening.</td>
</tr>
<tr>
<td>2.2</td>
<td>Evaluate and determine the consequence if the event should occur.</td>
</tr>
<tr>
<td>2.3</td>
<td>Consider and determine the risk level (likelihood and consequence combined).</td>
</tr>
<tr>
<td>2.4</td>
<td>Identify or source the criteria for determining the acceptability/unacceptability of the risk from the appropriate party.</td>
</tr>
<tr>
<td>2.5</td>
<td>Evaluate the risk against criteria to identify if it warrants ‘unacceptable risk’ status and the refer the</td>
</tr>
</tbody>
</table>
3 Identify and recommend treatments.

3.1 Identify the range of actions/treatments which may eliminate or minimise the risk.
3.2 Identify and consider the possible options for resolution of the problem/dealing with the risk.
3.3 Identify feasible options by preliminary analysis and consideration of possible options.
3.4 Conduct a detailed analysis of feasible options including the identification of resource requirements.
3.5 Select the most appropriate action/treatment for dealing with the situation.

4 Contribute to the implementation of treatments.

4.1 Plan selected action/treatment in detail, including the identification of resource requirements.
4.2 Gain approval for selected action/treatment in accordance with site requirements.
4.3 Review, prepare, test and document site working instructions (or equivalent) for the job.
4.4 Communicate information on the action/treatment and its implementation to the relevant people.

5 Review safety system documentation.

5.1 Monitor and review site working instructions (or equivalent) for compliance with statutory and site requirements.
5.2 Action amendments to the site working instructions (or equivalent) or refer the matter to the appropriate party for follow up.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Risk management processes may be undertaken at any mining site. They may involve the members of work groups, teams and management committees, and involve agencies and individuals external to the mine site.

Hazard is defined as: a source of potential harm or a situation with a potential to cause loss definition from AS/NZS 4360:1999 Risk Management).
Risk is defined as: *the chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood* definition from AS/NZS 4360:1999 Risk Management).

Likelihood is used as a qualitative description of probability and frequency definition from AS/NZS 4360:1999 Risk Management).

Probability is defined as: *the likelihood of a specific outcome, measured by the ratio of specific outcomes to the total number of possible outcomes. Probability is expressed as a number between 0 and 1, with 0 indicating an impossible outcome and 1 indicating an outcome is certain* definition from AS/NZS 4360:1999 Risk Management).

Consequence is defined as: *the outcome of an event of situation expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain* definition from AS/NZS 4360:1999 Risk Management).

Criteria for the acceptability/unacceptability of the risk must be determined by the organisation’s internal policy, goals and/or objectives in reference to relevant legislation.

Risk management processes and measures may include those focussed on:
- personal safety, eg personal protective equipment, medical standards, drug and alcohol, stress management and evacuation
- equipment and machinery isolation
- protection and guarding
- hazard identification and monitoring
- chemical safety
- fire safety
- other potential emergency related circumstances.

Site safety systems information may include:
- applicable Commonwealth/State/Territory legislation and codes of practice relating to the industry, dangerous and hazardous goods, environmental protection and safety and health.
- mine safety management systems
- manufacturer documentation and handbooks
- workplace operating procedures and policies
- material safety data sheets
- emergency procedures.

Statutory/legal compliance may include:
- common law
- dangerous goods
- development of training policies/programs to aid compliance
- mining legislation
- trade practices
- waterways
- weights and measures
- workers compensation/WorkCover
- requirements for the maintenance of records for statutory/legal breaches
provision of information and training
regulations and codes of practice relating to statutory/legal compliance
site representatives and committees
issue resolution.

Hazards may involve:
• equipment
• methods/plans
• people
• the work environment.

Treatments may include option type in sequence such as:
• eliminating the hazard
• substitution
• engineering controls
• administrative controls (procedures, etc.)
• PPE.

Resources may include:
• people
• finance
• equipment
• environment
• buildings/facilities
• technology
• information.

Consultation may include:
• regulatory authorities
• tenderers
• project managers
• contractors
• employees
• customers
• suppliers.

Records and reports may include:
• a full report including objective, method, results and recommendations
• Risk Assessment forms
• Action Planning documents.

Communications may include:
• face to face
• in writing
• by telephone or by other electronic means
• formal
• informal.
EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to apply risk management processes on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective application of risk management processes on a mine site, while complying with site safety, environmental, quality and communication requirements. This will include:
  a. Ability to transfer risk assessment processes to changing circumstances and to respond to unusual circumstances in the critical aspects of:
     a.1. conducting inspections
     a.2. identifying hazards
     a.3. assessing and identifying unacceptable risk
     a.4. identifying and recommending treatments
     a.5. contribution to the implementation of treatments
     a.6. reviewing safety system documentation.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- mining legislation and regulations
- appropriate mining context and language
- topics or subject areas which are target for assessment and treatment
- site risk management systems and their application
- conventions and requirements for written communications including report writing.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- research and use interpretative skills to locate, interpret, analyse and apply relevant operational information
- demonstrate technical literacy and communication skills sufficient to interpret and apply common industry terminology, and interpret work procedures and processes
- use plain English speaking and communication skills in relation to oral communications with supervisors and other employees
- apply questioning and active listening skills, eg when obtaining information of technical working practices
- demonstrate writing skills to allow effective report writing
- apply planning and organising skills sufficient to prepare for and apply the risk management processes covered in this unit
- demonstrate teamwork skills sufficient to involve and engage the employers/supervisors in the risk management processes
• apply problem solving skills to assess technical mining issues.

**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair, flexible and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:

- simulation/scenario analysis
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1002B Implement and apply risk management processes

Unit Descriptor
This unit covers the skills and knowledge required to implement and apply risk management processes within an established system for a mine site/area, including the application of local hazard identification, formal risk assessment and implementation of risk controls. It includes the monitoring of the system, reporting on implementation issues, communication of processes and systems, and the review and auditing of the risk management processes and systems.

Units Replaced:
This unit replaces the following units:
- MNC.G2.A Facilitate the risk management process

Links outside this unit:
The work covered in this unit relates to the Australian Standard AS/NZS 4360:1999 Risk Management and as appropriate: Recognised Standard – 02: control of risk management processes (Qld) or MDG 1010 & 1014 (NSW).

The work described in this unit is equivalent to MNQGEN500A Implement risk management system

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT PERFORMANCE CRITERIA

1 Determine the risk management process.
   1.1 Identify and determine the process to be used for risk management, in line with site requirements.
   1.2 Identify and document parameters of the risk assessment task as per site requirements.
   1.3 Access, interpret and apply the data and materials required to complete the risk assessment task, in accordance with site requirements.

2 Identify hazards.
   2.1 Identify and confirm types of potential hazards by reference to site circumstances and history/precedence.
   2.2 Break process into steps or parts for detailed hazard identification.
   2.3 Add to the defined process any potential variations from changes to work practices, systems or technology.
   2.4 Analyse the steps or parts of the process, and identify and document loss scenarios (hazards described as incidents or accidents).
<table>
<thead>
<tr>
<th>3</th>
<th>Assess risk.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Determine the <em>likelihood</em> of the event (loss scenario).</td>
</tr>
<tr>
<td>3.2</td>
<td>Analyse and determine the <em>consequence</em> if the event (loss scenario) should occur.</td>
</tr>
<tr>
<td>3.3</td>
<td>Determine the <em>risk</em> level of the loss scenario (likelihood and consequence combined).</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>4</th>
<th>Identify unacceptable risk.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Source or determine site criteria for assessing the acceptability of risks <em>risk acceptance</em> as per site requirements.</td>
</tr>
<tr>
<td>4.2</td>
<td>Determine the <em>risk</em> level or score by the application of the approved site criteria.</td>
</tr>
<tr>
<td>4.3</td>
<td>Clarify findings which are ambiguous, unclear or of doubtful accuracy by seeking expert advice.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>5</th>
<th>Identify potential actions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>Identify existing controls.</td>
</tr>
<tr>
<td>5.2</td>
<td>Identify, analyse and document as per site requirements the range of <em>risk controls</em> which may be appropriate for identified unacceptable risks.</td>
</tr>
<tr>
<td>5.3</td>
<td>Identify possible options for <em>risk control</em> by the use of the hierarchy of controls, considering the potential for operational effectiveness.</td>
</tr>
<tr>
<td>5.4</td>
<td>Verify feasible options for <em>risk control</em> by preliminary analysis and consideration, including potential to provide an integrated response to the range of issues.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6</th>
<th>Decide on action.</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>Select most appropriate <em>risk controls</em> for the situation from the feasible options.</td>
</tr>
<tr>
<td>6.2</td>
<td>Confirm the selected course of action following analysis of resource requirements, cost, safety and welfare issues within site constraints.</td>
</tr>
<tr>
<td>6.3</td>
<td>Document the selected course of action in accordance with site requirements.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7</th>
<th>Implement or facilitate action.</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1</td>
<td>Implement directly, or facilitate through others, the course of action.</td>
</tr>
<tr>
<td>7.2</td>
<td>Observe and apply all <em>safety regulations and procedures</em>.</td>
</tr>
<tr>
<td>7.3</td>
<td>Communicate to all involved parties (in accordance with site requirements) relevant information related to the new/revised <em>work procedures</em> and their implementation.</td>
</tr>
</tbody>
</table>
8 Review the implementation of action.

8.1 Determine and facilitate an ongoing review process to ensure implementation and application of risk controls in accordance with risk assessment outcomes, new/revised work procedures and accident investigation outcomes (in accordance with site requirements).

8.2 Review process, actions and controls to ensure continuing effectiveness in the changing work environment.

8.3 Respond to (or refer to the appropriate party for follow-up action) anomalies and shortcomings identified during the review process.

9 Audit the risk management process.

9.1 Conduct audits of risk management processes and work procedures to ensure compliance and effectiveness as per site requirements.

9.2 Respond to changed requirements identified during audits in a systematic and timely manner.

9.3 Complete and retain all risk management documentation as required by site and statutory requirements, covering the reason for, and changes made.

10 Complete records and reports.

10.1 Produce, process and maintain all risk management documentation and reports as specified by legislative and site requirements.

**RANGE STATEMENT**

The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

**Risk Management** is defined as: *the culture, processes and structures that are directed towards the effective management of potential opportunities and adverse effects* (definition from AS/NZS 4360:1999 *Risk Management*).

**Parameters of the risk management task** may include:

- objectives
- system boundaries
- hazard and consequence type
- methods
- team processes
- timing, venue/locations
- consultation and communication processes.
Interpret is defined as: *the understanding needed by the person within their job role.*

Hazard is defined as: *a source of potential harm or a situation with a potential to cause loss* (definition from AS/NZS 4360:1999 *Risk Management*).

Hazards may involve:
- equipment and materials
- people
- methods/plans/work systems
- the work environment.

Likelihood is *used as a qualitative description of probability and frequency* (definition from AS/NZS 4360:1999 *Risk Management*).

Consequence is defined as: *the outcome of an event expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain. There may be a range of possible outcomes associated with an event* (definition from AS/NZS 4360:1999 *Risk Management*).

Risk is defined as: *the chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood* (definition from AS/NZS 4360:1999 *Risk Management*).

Risk acceptance is defined as: *an informed decision to accept the consequences and the likelihood of a particular risk* (definition from AS/NZS 4360:1999 *Risk Management*). The criteria for acceptability of risks must be determined by the organisation’s internal policy, goals and/or objectives.

Risk controls may include:
- those focussed on personal safety, eg personal protective equipment, medical standards, drug and alcohol, stress management, evacuation procedures, fitness for duty
- those focussed on equipment/machinery safety, eg isolation, protection and guarding
- hazard identification and monitoring
- procedures for incident/emergency circumstances, eg fire safety procedures, chemical safety procedures.

Risk Control is defined as: *that part of risk management which involves the implementation of policies, standards, procedures and physical changes to eliminate or minimize adverse risks* (definition from AS/NZS 4360:1999 *Risk Management*).

Hierarchy of control should be considered using option types in sequence from:
- eliminating the hazard
- substitution
- engineering controls
- administrative controls (work procedures, etc)
- personal protective equipment (PPE).

Safety regulations and procedures may contain:
- legislation and regulations
- relevant Australian standards
• management plans
• OH&S policies
• codes of practice
• manufacturer instructions.

**Work procedures** may include:
• standard operating procedures (SOPs)
• safe operating procedures (SOPs)
• safe work procedures (SWPs)
• safe job procedures (SJPs).

**Audit** is defined as: *a systematic examination against defined criteria to determine whether activities and related results conform to planned arrangement, and whether these arrangements are implemented effectively and are suitable to achieve the organisation’s policy and objectives* (AS/NZS 4804: 2001).

**Audits** may be conducted internally, or may use external personnel. Aspects to be audited may include:
• parameters of the risk management task
• the process and resulting documentation used for risk management
• work procedures
• implementation plans and processes
• results of reviews of implementation.

**Risk management documentation and reports** may include:
• objectives
• parameters of the risk management task
• methodology
• results and recommendations
• the Risk Assessment forms
• Action Planning documents.

**Risk Assessment** is defined as: *the overall process of risk analysis and risk evaluation* (definition from AS/NZS 4360:1999 Risk Management).

**Probability** is defined as: *the likelihood of a specific outcome, measured by the ratio of specific events or outcomes to the total number of possible events or outcomes. Probability is expressed as a number between 0 and 1, with 0 indicating an impossible event or outcome and 1 indicating an event or outcome is certain* (definition from AS/NZS 4360:1999 Risk Management).

**Frequency** is defined as: *a measure of the rate of occurrence of an event expressed as the number of occurrences of an event in a given time* (definition from AS/NZS 4360:1999 Risk Management).

**Causes and effects** of common diseases and disabilities can be:
• musculo-skeletal injuries
• infectious diseases
• lung disease
• hearing loss.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**

- knowledge of procedures, requirements and instructions to implement and apply risk management processes appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective implementation and application of risk management processes appropriate to a mine site, while complying with site safety, environmental, quality and communication requirements. This will include:
  a. accessing and applying information gathering, analysis and organising procedures
  b. interpreting and communicating operational hazard-related information
  c. scoping risk assessment projects
  d. developing processes or functions into clear steps or components
  e. identifying and assessing hazards
  f. identifying appropriate control options to address an unacceptable hazard
  g. assessing and analysing risks
  h. identifying appropriate control options to address an unacceptable risk
  i. reviewing and auditing a risk control system/work procedures and measures to determine compliance and effectiveness, and respond to identified anomalies
  j. maintaining records and reports such as the Risk Assessment reports and forms.

**Required Knowledge**

Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- the Australian/New Zealand standard on *Risk Management* (4360:1999)
- NSW MDG 1010 & 1014 (NSW only)
- relevant site and equipment safety requirements
- statutory and site rules, policies, procedures and regulations
- the Risk Management process
- Risk Assessment scoping methods
- Risk Assessment methods including:
  - identifying hazards
  - assessing risks
  - determining acceptability of risks
  - identifying existing controls
  - determining adequacy of current controls
  - identifying new potential controls
- Risk Management documentation and reporting methods used at a mine site
- methods of identifying Risk Control actions based on cost, safety and welfare issues
- action planning and implementation methods
- review and auditing methods
- basic human physiology
- the effects of hazards on people’s health and hygiene
- causes and effects of common diseases and disabilities.
**Required Skills**

Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- read, interpret, apply and communicate technical information, procedures, regulations in the workplace
- communicate effectively with a range of people in the workplace
- facilitate a group of people to achieve a required outcome
- interview process participants
- facilitate and document a scoping session for a risk assessment
- facilitate a risk assessment exercise
- be involved in a risk assessment as team members
- proactively identify hazards
- analyse the hazard to identify and score the risk
- select the appropriate action to reduce unacceptable risk
- document the risk assessment
- clearly document all aspects of a Risk Management process
- maintain relevant records and documents
- audit a system for compliance and effectiveness, and recommend changes to improve effectiveness
- monitor and recommend changes to processes
- identify hazards which may have acute and long-term effects on people.

**Assessment and Interdependence of Units**

This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**

There are no pre-requisite units for this unit.

**Resource Implications**

Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**

To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**

This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair, flexible and sufficient evidence should be accumulated to demonstrate the required competence.
The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**

Appropriate methods of assessment for this unit will usually include:
- simulation/scenario analysis
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1003A Establish the risk management system

Unit Descriptor
This unit covers the actions taken to lead, manage and coordinate the risk management system for a mine.

Units Replaced
This unit replaces the following units:
- MNC.G3.A Establish the risk control system.

Links outside this unit:
The work covered in this unit relates to the Australian Standard AS/NZS 4360:1999 Risk Management and/or MDG 1010 & 1014.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Establish the risk management system.</td>
</tr>
<tr>
<td>1.1</td>
<td>Identify and document site/enterprise policy and strategic safety and risk management goals and approaches.</td>
</tr>
<tr>
<td>1.2</td>
<td>Establish structures and frameworks for the implementation and on-going management of the risk management system.</td>
</tr>
<tr>
<td>1.3</td>
<td>Identify, record and allocate responsibility for site specific functional and/or area aspects of the risk management system.</td>
</tr>
<tr>
<td>2</td>
<td>Establish processes to support the risk management system.</td>
</tr>
<tr>
<td>2.1</td>
<td>Establish document and communicate detailed processes covering risk assessment, risk analysis and risk control.</td>
</tr>
<tr>
<td>2.2</td>
<td>Provide/arrange appropriate development and/or training for those who have responsibilities within the risk management system.</td>
</tr>
<tr>
<td>2.3</td>
<td>Identify, obtain, maintain information sources required to support the risk management system, and make available to those who implement the control processes.</td>
</tr>
<tr>
<td>2.4</td>
<td>Make available information on known and intended process changes and enhancements to those responsible for implementing control processes.</td>
</tr>
<tr>
<td>2.5</td>
<td>Determine site criteria for assessing the acceptability of risks, and make available to those responsible for implementing control processes.</td>
</tr>
</tbody>
</table>
2.6 Obtain advice and provide, as necessary, to those responsible for implementing control processes.

3 Implement the risk management system.

3.1 Plan, schedule and document risk management system coverage of the work environment.

3.2 Monitor risk management system activities and achievement targets and provide/focus resources.

3.3 Provide support and encouragement to those responsible for the detailed system activities.

3.4 Review risk management system application periodically and modify when issues are identified or when changing circumstances are anticipated or occur.

4 Audit risk management system and processes.

4.1 Formally audit risk management system, including Standard Operating Procedures and implementation processes to ensure compliance and effectiveness.

4.2 Respond to changed requirements disclosed during audits in a systematic and timely manner.

4.3 Complete risk management system documentation covering the reasons for and changes made and retain in accordance with site requirements.

5 Complete records and reports.

5.1 Produce, process and maintain all risk management documentation and reports as specified by legislative and site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Risk Management definitions:

Risk is defined as: the chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood (definition from AS/NZS 4360:1999 Risk Management).

Risk Assessment is defined as: the overall process of risk analysis and risk evaluation (definition from AS/NZS 4360:1999 Risk Management).

Risk analysis is a systematic use of available information to determine how often specified events may occur and the magnitude of their consequences.
Risk Control is defined as: that part of risk management which involves the implementation of policies, standards, procedures and physical changes to eliminate or minimize adverse risks (definition from AS/NZS 4360:1999 Risk Management).

Consequence is defined as: the outcome of an event expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain. There may be a range of possible outcomes associated with an event (definition from AS/NZS 4360:1999 Risk Management).

Frequency is defined as: a measure of the rate of occurrence of an event expressed as the number of occurrences of an event in a given time. (definition from AS/NZS 4360:1999 Risk Management).

Hazard is defined as: a source of potential harm or a situation with a potential to cause loss (definition from AS/NZS 4360:1999 Risk Management).

Likelihood is used as a qualitative description of probability and frequency (definition from AS/NZS 4360:1999 Risk Management).

Loss is any negative consequence, financial or otherwise.

Probability is defined as: the likelihood of a specific outcome, measured by the ratio of specific events or outcomes to the total number of possible events or outcomes. Probability is expressed as a number between 0 and 1, with 0 indicating an impossible event or outcome and 1 indicating an event or outcome is certain. (definition from AS/NZS 4360:1999 Risk Management).

Risk acceptance is defined as: an informed decision to accept the consequences and the likelihood of a particular risk (definition from AS/NZS 4360:1999 Risk Management).

The criteria for acceptability of risks must be determined by the organisation’s internal policy, goals and/or objectives.

Risk avoidance is an informed decision not to become involved in a risk situation.

Risk identification is the process of determining what can happen, why and how.

Monitor is to check, supervise, observe critically, or record the progress of an activity, action or system on a regular basis in order to identify change.

Risk Management Process is the systematic application of management policies, procedures and practices to the tasks of establishing the context, identifying, analysing, evaluating, treating, monitoring and communicating risk.

Parameters of the risk management task may include:
- objectives
- system boundaries
- hazard and consequence types
- methods
- team processes
- timings
- venue/locations
- consultation processes.
**Hazards in the workplace** may involve:
- equipment
- methods/plans
- competencies and/or the work environment.

**Controls for hazards** should be considered using option types in sequence from:
- eliminating the hazard
- substitution
- engineering controls
- administrative controls (procedures, etc)
- Personal Protective Equipment.

**Records and reports for risk assessment** may include a full report, including:
- objective
- method
- results and recommendations
- risk assessment forms
- action planning documents.

**Site policy, objectives, rules and procedures** will vary from site to site.

**Cost of activities**, both direct and indirect, involving any negative impact, including:
- money
- time
- labour
- disruption
- goodwill
- political lobbying
- intangible losses.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to establish the risk management system appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective establishment and management of the risk management system appropriate to a mine site, while complying with site safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety requirements
  b. interpreting and communicating technical risk control process
  c. establishing strategies, structures and frameworks for the mines risk management system
  d. identifying and allocating risk management process responsibility
e. establishing information and training processes to support the mines risk management system
f. implementing the mines risk management system
g. auditing the risk management system and processes
h. maintaining risk management records and reports
i. coordinating and monitoring actions and responding to changing situations.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- legislative and site rules, policies, procedures and regulations
- operational safety requirements
- relevant site and equipment safety requirements
- personal safety measures
- risk assessment methods
- risk control processes
- management systems
- risk management system documentation methods
- methods of identifying appropriate action based on cost, safety and welfare issues
- action planning methods
- monitoring and auditing methods
- communication and consultation methods, written and oral
- reporting and recording procedures.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- read, interpret, analyse, apply and communicate technical information, rules, procedures, regulations, etc
- provide leadership and guidance for group activities
- communicate and consult effectively in the workplace
- facilitate and document risk management planning
- maintain relevant records and documents
- monitor and decide on changes to process.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.
Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair, flexible and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- a portfolio of documentary evidence
- inspection of the final product or outcome
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1004A  Respond to local emergencies and incidents

Unit Descriptor
This unit covers the individual response to emergency or incident situations in any location within an open-cut or underground mine.

Units Replaced
This unit replaces the following unit:
- MNC.G4.A Respond to local emergencies and incidents

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Prepare for emergency procedures.</td>
</tr>
<tr>
<td>1.1</td>
<td>Locate and maintain emergency equipment in accordance with statutory requirements, site procedures and manufacturer specifications.</td>
</tr>
<tr>
<td>1.2</td>
<td>Identify and confirm nature, scope and location of the emergency or incident.</td>
</tr>
<tr>
<td>1.3</td>
<td>Assess emergency or incident and determine appropriate course of action in keeping with requirements for personal safety.</td>
</tr>
<tr>
<td>1.4</td>
<td>Notify emergency or incident in accordance with authorised procedures and methods of communication.</td>
</tr>
<tr>
<td>2</td>
<td>Respond to emergency or incident situations.</td>
</tr>
<tr>
<td>2.1</td>
<td>Follow emergency evacuation procedures where appropriate and in accordance with site procedures.</td>
</tr>
<tr>
<td>2.2</td>
<td>Coordinate and control response to emergency or incident to ensure continuing safety of personnel at the site.</td>
</tr>
<tr>
<td>2.3</td>
<td>Isolate potential sources of danger and put in place warning signs/signals/barriers.</td>
</tr>
<tr>
<td>2.4</td>
<td>Select emergency equipment and use appropriately to deal with the emergency.</td>
</tr>
<tr>
<td>2.5</td>
<td>Take local measures to reduce impact of emergency or incident.</td>
</tr>
<tr>
<td>2.6</td>
<td>Continually monitor and assess emergency situation and changes in circumstances, communicate requests for further assistance or evacuation to appropriate officials.</td>
</tr>
<tr>
<td>2.7</td>
<td>Exercise control of the emergency or incident situation until formal relief is notified/received.</td>
</tr>
</tbody>
</table>
RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Emergency Equipment or materials may include:
- roof support materials
- fire fighting equipment
- pumping equipment
- relevant plant and equipment
- First Aid equipment
- communication systems
- self rescuers (conversion / filter units or oxygen generation)
- self contained breathing apparatus
- respiratory protection
- lifting and cutting equipment
- rescue/recovery equipment
- emergency bunds
- absorption materials
- spill response kits
- personal protection equipment
- chemical safety systems.

Safety information and procedures may be contained in:
- legislation and regulations
- relevant Australian Standards
- management systems and plans
- manager’s rules
- OH&S policy
- codes of practice
- safe working procedures (or equivalent).

Local operational emergencies/incidents may include:
- falls
- explosion/ignition
- inundation
- power failure
- fires
- vehicle/equipment accidents
- industrial gas leakages.

Local personnel related emergencies/incidents may include:
- injuries
- critical response First Aid
- evacuation
- entrapment
- rescue.
Local **environmental incidents** may include:

- fires
- chemical spills
- overtopping of dams
- spillage of oils, fuels, water
- coal spillage
- dust outside normal limits.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**

The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to respond to local emergencies and incidents on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective response to local emergencies and incidents on a mine site, while complying with site safety, environmental, quality and communication requirements. This will include:
  
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on emergencies and incidents
  c. identifying and reporting emergencies/incidents
  d. assessing emergency situations/incidents
  e. responding appropriately to the emergency/incident
  f. controlling the emergency situation/incident until relieved
  g. contributing to post emergency debriefing
  h. completing operator maintenance on emergency equipment.

**Required Knowledge**

Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- statutory requirements
- mine emergency procedures
- mine incident procedures
- initial response first aid
- breathing apparatus
- fire fighting
- hazards and potential hazards
- relevant geological and survey data
- relevant ventilation information
- mine plans
- mine communication systems.

**Required Skills**

Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
- identify hazards/potential hazards
- observe, analyse and report emergencies/incidents
- read and interpret mine plans
- apply initial response first aid
- apply fire fighting techniques
- communicate
- read, interpret and apply relevant geological and survey data

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair, flexible and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
- simulation/scenario analysis
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.
Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1005A   Conduct fire team operations

Unit Descriptor
This unit covers the functions of a mine fire team member.

Units Replaced
This unit replaces the following units:
• MNC.G5.A Conduct fire team operations.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT   PERFORMANCE CRITERIA

1 Plan and prepare for work.

1.1 Access, interpret and confirm legislative and site requirements governing fire team operations.

1.2 Identify and confirm personal safety requirements and the individual’s role in the fire team.

1.3 Identify and clarify fire risks in the mine and the likely impact and responses to site specific hazards.

1.4 Identify *types of fire fighting appliances* and confirm their applications.

1.5 Identify and confirm location and range of appliances held at relevant fire boards, depots, sub-stations and stations by site visit.

2 Fight or contain fires.

2.1 Receive, clarify and confirm notification of fire operations from the appropriate authority.

2.2 Move to the fire site in accordance with site procedures.

2.3 Identify and pass details, or receive and clarify the type, nature, source and intensity of the fire to appropriate authorities.

2.4 Select appliances and equipment appropriate to the fire circumstances and apply in accordance with manufacturer/site instructions.

2.5 Continually monitor conditions in the fire area and modify fire fighting techniques/applications to reduce the impact of identified and potential hazards.

2.6 Avoid unnecessary risks to the individual and other team members and follow evacuation procedures in accordance with site rules.

2.7 Apply isolation procedures in accordance with site rules.
3 Finalise the operation.

3.1 Avoid fire recurrence by the appropriate processes, including watering, rake down and chemical means.

3.2 Isolate, rope-off, secure and monitor fire area in accordance with site procedures.

3.3 Clean and inspect appliances and equipment and replace in the designated location or process for maintenance and repair.

3.4 Undertake debriefs and complete records in accordance with mine procedures.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Types of fire fighting appliances may include:
- extinguishers
- hoses – water
- expansion foam
- expansion foam generator
- spanners
- nozzles
- breaches
- hand tools
- water pumps.

Potential hazards may include:
- smoke
- heat
- roof and rib
- buildings
- chemicals
- gases
- ventilation.

Types of fire are as per Australian Standards:

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to conduct fire team operations on a mine site.
• implementation of appropriate procedures and techniques for the efficient and effective conduct of fire team operations on a mine site, while complying with site safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on fire fighting operations
  c. identifying the type and nature of fire
  d. reporting the fire
  e. working cooperatively within the fire team
  f. selecting the appropriate equipment for the fire type
  g. applying fire fighting procedures
  h. applying evacuation procedures
  i. avoiding panic situations
  j. completing operator maintenance on fire fighting equipment
  k. completing debriefing processes.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
  • legislative and site rules
  • causes, characteristics, hazards and responses to the types of fire
  • mine gases and characteristics
  • basic mine geology and survey information related to fire operations
  • basic building structural information related to fire operations
  • fire fighting equipment
  • fire fighting techniques
  • isolation and tagging procedures
  • basic teamwork
  • critical situation dynamics and control
  • communication and reporting procedures
  • initial response first aid.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
  • apply operational safety requirements
  • access, interpret and apply technical fire operational information
  • identify hazards / potential hazards
  • assess the required response
  • follow evacuation procedures
  • fight fires
  • administer first aid
  • use hand tools
  • work as a team member
  • isolate and tag.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair, flexible and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:

- simulation/scenario analysis
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1006A Incorporate health and hygiene factors into mine management

Unit Descriptor

This unit covers the strategic management functions and underpinning knowledge required for the establishment of health and hygiene coverage within the mine’s operational and safety hazard management activities.

Units Replaced

This unit replaces the following units:
- MNC.G6.A Incorporate health and hygiene factors into mine management.

Employability Skills

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

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<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
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<td>1</td>
<td>Identify the factual chain and focus of common diseases.</td>
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<tr>
<td>1.1</td>
<td>Identify the causes, symptoms and impacts of stress on employee health and effectiveness.</td>
</tr>
<tr>
<td>1.2</td>
<td>Identify the potential impacts of shiftwork on employee health and effectiveness.</td>
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<tr>
<td>1.3</td>
<td>Identify the potential impacts of drug and substance abuse on employee health and effectiveness.</td>
</tr>
<tr>
<td>2</td>
<td>Incorporate health and hygiene factors into the work environment.</td>
</tr>
<tr>
<td>2.1</td>
<td>Identify, analyse and use legislative and industry standards as the basis for health and hygiene activities.</td>
</tr>
<tr>
<td>2.2</td>
<td>Incorporate health and hygiene factors into mine operational planning and management systems.</td>
</tr>
<tr>
<td>2.3</td>
<td>Incorporate health and hygiene factors into mine safety management plans.</td>
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<tr>
<td>2.4</td>
<td>Establish and resource work injury recording systems.</td>
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<td>2.5</td>
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<td>2.8</td>
<td>Establish and maintain mine transport networks and rules.</td>
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<td>3</td>
<td>Establish health and hygiene protection</td>
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<tr>
<td>3.1</td>
<td>Establish, review and update individual medical recruitment and re-appraisal measures.</td>
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</tbody>
</table>
measures for individuals.

3.2 Establish and resource *health and hygiene* training systems and programs.

3.3 Establish and resource *personal protection* equipment systems and measures.
3.4 Establish and resource systems and procedures for manual and assisted handling.

4 Establish control measures for operational health and hygiene hazards.

4.1 Analyse health hazards related to mine lighting and establish appropriate systems and procedures.

4.2 Analyse health hazards associated with vibration and establish appropriate systems and procedures.

4.3 Analyse health hazards associated with noise and establish appropriate systems and procedures.

4.4 Analyse health hazards associated with exposure to extremes of heat/cold and establish appropriate systems and procedures.

4.5 Analyse health hazards associated with equipment and materials and establish appropriate systems and procedures.

4.6 Analyse health hazards associated with atmospheric conditions and incorporate appropriate control measures and systems into the ventilation/gas management plans.

4.7 Analyse health hazards associated with the handling, storage and conveyance of explosives and establish appropriate systems and procedures.

4.8 Analyse health hazards associated with radiation and radiation sources and establish appropriate systems and procedures.

5 Incorporate health and hygiene factors within mine audit and review systems.

5.1 Review the effectiveness of health and hygiene management, as part of both operational and safety hazard management systems, for compliance with legislation and industry practice.

5.2 Audit the health and hygiene training program/content for currency, relevance and compliance.

5.3 Audit recording and reporting systems for compliance and legislation, industry and mine requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.
**Shift work** responses are related to circadian rhythms (24 hour rhythms) and may result in:
- disturbed or inadequate sleep
- fatigue
- depression and neuroses
- dependence on drugs
- susceptibility to sickness
- disturbed family and social life.

**Health and hygiene** factors for inclusion in safety systems and plans may include:
- policy
- accountability
- supervision
- workforce involvement
- physical environment
- risk assessment practices
- work planning
- external information
- medical / first-aid
- rehabilitation.

**Work injury recording systems** may include:
- definitions (occupational injury, fatal injury, work days lost, employees, time frames)
- data management
- reporting parameters
- reporting
- investigation.

**Sanitation and hygiene** infrastructure may include:
- systems for water (potable) and waste water
- maintenance of cleanliness and sanitation
- toilets
- washing facilities
- hand basins
- crib rooms / dining areas
- shower / changing facilities
- vermin control and eradication
- drainage of stagnant water
- waste decaying wood
- refuse disposal
- sheltered reception areas
- regular checking processes.

**Chemical and hazardous substance control** measures may include:
- elimination
- substitution
- isolation and protection
- engineering controls (ventilation, containment etc)
- safe work practices
• personal protective equipment and new product management measures (need, assessment, controls, surveillance, induction and training).

**Chemical and hazardous substances** in mines may include:

- industrial chemical
- diesel
- hydraulics
- oils
- liquefied petroleum gas
- polyurethane
- asbestos.

**Dust control measures** may include:

- establishment of a dust control program
- monitoring and analysis of dust
- identification and responses to dust problems
- selection and application of appropriate methods to determine dust concentrations.

**Mine transport networks and rules** may include:

- route
- speed limits
- controls
- signage
- mine and mine working planning, including:
  - health and hygiene factors related to historical area region data
  - mine plans (currency comprehensives, accuracy, surveys, reporting systems (dangerous occurrences, conditions, incidents)
  - materials handling systems and capacities
  - hung pass / chutes / bins systems
  - confined spaces and trenches and similar hazardous constructions.

**Personal protection** may include those for:

- hearing
- eyes (industrial, radiation, ultra-violet, infra-red radiation)
- respiratory protective devices
- hand (gloves)
- head
- feet (boots)
- long hair
- protective clothing
- safety belts and harnesses
- safety signs.

**Mine lighting** requirements may include:

- general work areas
- personal lighting for underground use
- machinery mounted lighting systems
- visual displays
• emergency lighting systems.

**Equipment and materials** safety strategies may include:
• selection and acquisition procedures
• material safety data sheets (MSDS)
• risk assessment
• health and safety audits
• work procedures
• training requirements for operation
• maintenance procedures.

**The causal chain and focus of disease** may include:
• basic cell structure
• basic DNA
• sites where toxic substances can cause disease
• routes of entry
• routes of exit
• physic injuries
• routes of entry for disease, including:
  - the mechanisms covering inhalation
  - absorption
  - ingestion.

**Common disease** may include the fundamental causes and effects of:
• lung disease
• chronic bronchitis
• emphysema
• heart disease
• pulmonary oedema
• pulmonary fibrosis
• cancers
• hypersensitivity
• occupational asthma
• alveolitis
• dermatitis
• allergic contact dermatitis
• skin cancer
• poisoning
• nervous system disease
• circulatory system disease.

**Common disease** related to routes of exit may include:
• liver
• kidney
• bladder
• reproductive systems
• cover the latency potential.
Stressors (cause of stress) may include:
- environmental factors
- bad workplace design
- work hazards
- job design
- job monotony
- contractual conditions
- esteem values
- relationship difficulties
- lack of control
- physical impairments.

Stress effects may include:
- fatigue
- anxiety
- hypertension
- depression
- hostility and aggression
- psychosomatic complaints
- neuroses

They may be associated/linked with:
- bronchial asthma
- nervous rashes
- diabetes
- some cancers.

Drugs and substances may include:
- alcohol
- nicotine
- drugs and prescription
- other medicinal drugs
- illicit drugs and substances.

Atmosphere and ventilation measures may include:
- identification of air standards (oxygen, impurities, contaminants, dust)
- establishment of appropriate evaluation and air quality control systems
- assessment of protection needs
- authorisation for nominated activities
- maintenance of adequate records of air quality levels. (see CULP 106 for further detail).

Medical recruitment and re-appraisal measures may include:
- common medical examination requirements
- frequency of examinations and hot/cold work replacement assessment
- common medical examination coverage including:
  - medical history
  - physical characteristics (height, weight, blood pressure, vision, hearing)
- physical examination (central nervous system, digestive system, heart and lungs, muscular-skeletal system)
- biological measurement (urinalysis, blood tests)
- electrocardiograms
- stress tests.

**Training** may include:
- induction
- on-the-job discussions
- safety meetings
- OH&S committees
- circulars
- safety training sessions
- encouragement incentives
- input into developments
- health and hygiene inspections.

**Vibration hazards** may contribute to, or result in:
- bone damage
- stomach and digestive problems
- heart problems
- varicose veins
- varicocle
- piles
- disruption to the nervous system resulting in:
  - weakness
  - fatigue
  - loss of appetite
  - irritability
  - headache
  - insomnia
  - impotence.

**Vibration hazard analysis** may include:
- extent of damage factors (time of exposure, vibration frequency rate, amplitude of vibration)
- types of vibration (whole body vibration, VLF whole body vibration, LF whole body vibration
- hand-arm vibration (vibration white fingers)
- vibration controls, including vibration surveys, establishment of vibration limits
- establishment of targets for vibration limits
- provision of training in vibration measurement
- establishment, implementation and monitoring of vehicle/equipment design criteria (operation, seating, mountings, portable machinery).

**Noise management controls** may include:
- establishment of noise limits
- regular measurement and recording of noise
• engineering/design of noise controls
• establishment of noise protection zones
• identification
• provision and testing of noise protection equipment
• adequate training of personnel
• appropriate audiometric testing regime.

**Heat exposure protection** may include:
• adequate training of personnel
• measurements of heat stress index
• monitoring of index and employees
• establishment of cool rest areas
• provision of cool water
• provision of canopies, cabins and approaching clothing.

**Explosive control systems** may include:
• legislative requirements
• selection and procurement
• storage
• conveyance
• handling
• handling of old / deteriorated stock
• misfires
• entry after blasting
• charging
• inspections
• initiation
• storms
• electronic risks.

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**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

• knowledge of procedures, requirements and instructions to incorporate health and hygiene factors into mine management appropriate to a mine site
• implementation of appropriate procedures and techniques for the efficient and effective incorporation of health and hygiene factors into mine management appropriate to a mine site, while complying with site safety, environmental, quality and communication requirements. This will include:
  a. interpreting and communicating information on health and hygiene matters
  b. identifying, explaining and responding to the fundamentals of human disease and injury
  c. identifying, explaining, anticipating and responding to situations involving stress, shiftwork effects and drug and substance abuse
d. identifying, anticipating and responding to health and hygiene hazards
e. incorporating health and hygiene coverage into the mine’s human resource
   recruitment, management and administrative systems and processes
f. incorporating health and hygiene coverage into mining and operational infrastructure,
   plans and management processes
g. incorporating health and hygiene coverage into the mine’s equipment / materials
   procurement, management and maintenance systems and procedures
h. incorporating health and hygiene coverage into safety hazard management plans and
   processes
i. establishing the mine’s health and hygiene training systems and programs.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards
of performance required in the workplace, to transfer the skills to other contexts and to deal
with unplanned events. Assessment requires evidence of the ability to identify and explain
the purpose of:
• legislative and industry health and hygiene standards and compliance requirements
• health and hygiene policy development processes and techniques
• procedures and techniques for establishing health and hygiene objectives, targets,
   performance indicators and criteria
• health and hygiene management systems information support requirements and
   options
• risk management and control theory and processes
• continuous improvement processes and techniques
• fundamentals of human disease and injury
• causes, symptoms and impacts of stress on employees
• potential impacts of drug and substance abuse
• individual medical standards and examination systems
• rehabilitation options, processes and techniques
• personnel protective equipment and measures
• manual handling codes and practices
• sanitation and hygiene infrastructure and operational requirements
• mine hazards associated with hazardous substances and the likely impacts on
   personnel
• chemical information management systems
• mine hazards associated with atmosphere and the likely impacts on personnel
• atmosphere and dust control and protection systems
• mine hazards associated with mining processes and the likely impacts on personnel
• health hazards associated with exposure to heat/cold conditions
• hazards associated with explosives
• health hazards associated with radiation and radiation sources
• mine hazards associated with equipment and plant and the likely impacts on personnel
• equipment/plant safeguarding options and techniques
• equipment/plant isolation techniques
• health hazards associated with lighting
• health hazards associated with vibration
• health hazards associated with noise
• mine transport network design and planning requirements
• conventional signage techniques
• area isolation techniques
• health and hygiene training requirements and systems.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
• access, interpret and apply technical information
• communicate ideas and information
• plan and organise activities
• prepare and document policy, plans and procedures
• apply risk management processes and techniques
• conduct enquiries / investigations and prepare reports
• access, evaluate and apply data from monitoring systems and equipment / plant work with others and in teams
• validate training analysis results
• apply review and audit processes and techniques.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.
Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1007A Implement and monitor health and hygiene management systems

Unit Descriptor
This unit covers the operational management functions required for the implementation and monitoring of health and hygiene systems.

Units Replaced
This unit replaces the following units:
- MNC.G7 bv n b
  nnnnnnnnnA Implement and apply health and hygiene management measures.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

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<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
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<tbody>
<tr>
<td>1</td>
<td>Identify the effects and symptoms associated with workplace health and hygiene.</td>
</tr>
<tr>
<td>1.1</td>
<td>Identify the causal chain and focus of common diseases.</td>
</tr>
<tr>
<td>1.2</td>
<td>Identify the effects and symptoms of stress on employee health and effectiveness.</td>
</tr>
<tr>
<td>1.3</td>
<td>Identify the effects and symptoms of shift work on employee health and effectiveness.</td>
</tr>
<tr>
<td>1.4</td>
<td>Identify the effects and symptoms of alcohol and other drug/substance abuse on employee health and effectiveness.</td>
</tr>
<tr>
<td>2</td>
<td>Identify and monitor health and hygiene standards and systems.</td>
</tr>
<tr>
<td>2.1</td>
<td>Identify and interpret legislative, industry and site standards for health and hygiene.</td>
</tr>
<tr>
<td>2.2</td>
<td>Identify and monitor health and hygiene requirements within the mine operational planning and management systems.</td>
</tr>
<tr>
<td>2.3</td>
<td>Identify and monitor health and hygiene requirements within the mine safety management plans.</td>
</tr>
<tr>
<td>2.4</td>
<td>Monitor and review work injury recording systems as required by legislation and organisational guidelines.</td>
</tr>
<tr>
<td>2.5</td>
<td>Monitor and review sanitation and hygiene systems as required by legislation and organisational guidelines.</td>
</tr>
<tr>
<td>2.6</td>
<td>Monitor and review chemical and hazardous substances control systems as required by legislation and organisational guidelines.</td>
</tr>
<tr>
<td>2.7</td>
<td>Implement and monitor atmospheric and dust control measures in accordance with the ventilation management plan.</td>
</tr>
</tbody>
</table>
3 Implement and monitor health and hygiene protection measures for individuals.

3.1 Implement, monitor and review health and hygiene training systems and programs.

3.2 Implement and monitor personal protection equipment systems and measures and monitor the effectiveness of protection.

3.3 Resource, implement and monitor systems and procedures for manual and assisted handling.

4 Identify, implement and monitor control measures for operational health and hygiene hazards.

4.1 Identify, implement and monitor control measures and standards related to mine lighting.

4.2 Identify, implement and monitor control measures and standards related to vibration.

4.3 Identify, implement and monitor control measure and standards related to noise.

4.4 Identify, implement and monitor control measures and standards associated with exposure to extremes of heat/cold.

4.5 Identify, implement and monitor control measures associated with equipment and materials.

4.6 Identify, implement and monitor air quantity and quality control measures.

4.7 Identify, implement and monitor control measures and standards related to the handling, storage and conveyance of explosives.

4.8 Identify, implement and monitor control measures and standards related to radiation and radiation sources.

5 Audit and review systems in respect of health and hygiene measures.

5.1 Review the effectiveness of health and hygiene management, as part of both operational and safety hazard management systems, for compliance with legislation, industry practice and the appropriate mine management plan.

5.2 Investigate and respond to circumstances which give rise to or threaten the health and hygiene of individuals, or refer to the appropriate authority for response.

5.3 Audit and/or review the health and hygiene training program/content for currency, relevance and compliance.

5.4 Review and/or audit recording and reporting systems for compliance with legislation, industry and mine requirements.
RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.
Causes of stress (stressors) may include:
- environmental factors
- bad workplace design
- work hazards
- job design
- job monotony
- contractual conditions
- esteem values
- relationship difficulties
- lack of control
- physical impairments.

Stress effects may include:
- fatigue
- anxiety
- hypertension
- depression
- hostility and aggression
- psychosomatic complaints
- neuroses

They may also be associated/linked with:
- bronchial asthma
- nervous rashes
- diabetes
- some cancers.

Shift work responses are related to circadian rhythms (24 hour rhythms) and may result in:
- disturbed or inadequate sleep
- fatigue
- depression and neuroses
- dependence on drugs
- susceptibility to sickness
- disturbed family and social life.

Alcohol and other drug/substances may include:
- alcohol
- nicotine
- prescription drugs
- other medicinal drugs
- illicit drugs and substances.

Health and hygiene legislative, industry and site, standards may include:
- policy
- accountability
- supervision
- workforce involvement
- physical environment
• risk assessment practices
• work planning
• external information
• medical/first-aid
• rehabilitation.

**Work injury recording systems** may include:
• definitions (occupational injury, fatal injury, work days lost, employees, time frames)
• data management
• reporting parameters
• reporting
• investigation.

**Sanitation and hygiene** infrastructure may include:
• systems for water (potable) and waste water
• maintenance of cleanliness and sanitation
• toilets
• washing facilities
• hand basins
• crib rooms / dining areas
• shower / changing facilities
• vermin control and eradication
• drainage of stagnant water
• waste decaying wood
• refuse disposal
• sheltered reception areas
• regular checking processes.

**Chemical and hazardous substances** in mines may include:
• industrial chemical
• diesel
• hydraulics
• oils
• liquefied petroleum gas
• polyurethane
• asbestos.

**Chemical and hazardous substance control systems** may include:
• elimination
• substitution
• isolation and protection
• engineering controls (ventilation, containment etc)
• safe work practices
• personal protective equipment
• new product management measures (need, assessment, controls, surveillance, induction and training).
Atmosphere and ventilation measures may include:
- identification of air standards (oxygen, impurities, contaminants, dust)
- establishment of appropriate evaluation and air quality control systems
- assessment of protection needs
- authorisation for nominated activities
- maintenance of adequate records of air quality levels. (see CULP 106 for further detail).

Training and re-training may include:
- induction
- on-the-job discussions
- safety meetings
- OH&S committees
- circulars
- safety training sessions
- encouragement incentives
- input into developments
- health and hygiene inspections.

Personal protection may include those for:
- hearing
- eyes (industrial, radiation, ultra-violet, infra-red radiation)
- respiratory protective devices
- hand (gloves)
- head
- feet (boots)
- long hair
- protective clothing
- safety belts and harnesses
- safety signs.

Mining lighting requirements may include:
- general work areas
- personal lighting for underground use
- machinery mounted lighting systems
- visual displays
- emergency lighting systems.

Vibration hazards may contribute to, or result in:
- bone damage
- stomach and digestive problems
- heart problems
- varicose veins
- varicocle
- piles
- disruption to the nervous system resulting in:
  - weakness
  - fatigue
  - loss of appetite
- irritability
- headache
- insomnia
- impotence.

**Vibration hazard analysis** may include:
- extent of damage factors (time of exposure, vibration frequency rate, amplitude of vibration)
- types of vibration (whole body vibration, VLF whole body vibration, LF whole body vibration)
- hand-arm vibration (vibration white fingers).

**Vibration controls** may include:
- vibration surveys
- establishment of vibration limits
- establishment of targets for vibration limits
- provision of training in vibration measurement
- establishment, implementation and monitoring of vehicle / equipment design criteria (operation, seating, mountings, portable machinery).

**Noise management controls** may include:
- establishment of noise limits
- regular measurement and recording of noise
- engineering / design of noise controls
- establishment of noise protection zones
- identification
- provision and testing of noise protection equipment
- adequate training of personnel
- an appropriate audiometric testing regime.

**Heat/cold exposure protection** may include:
- adequate training of personnel
- measurements of heat stress index
- monitoring of index and employees
- establishment of cool rest areas
- provision of cool water
- provision of canopies, cabins and appropriate clothing.

**Equipment and materials control measures** may include:
- selection and acquisition procedures
- material safety data sheets (MSDS)
- risk assessment
- health and safety audits
- work procedures
- training requirements for operation
- maintenance procedures.
Explosive control systems may include:
- legislative requirements
- selection and procurement
- storage
- conveyance
- handling
- handling of old / deteriorated stock
- misfires
- entry after blasting
- charging
- inspections
- initiation
- storms
- electronic risks.

Dust control measures may include:
- establishment of a dust control program
- monitoring and analysis of dust
- identification and responses to dust problems
- selection and application of appropriate methods to determine dust concentrations.

The causal chain and focus of disease may include:
- basic cell structure
- sites where toxic substances can cause disease
- routes of entry
- routes of exit
- physic injuries.

Routes of entry for disease may include:
- mechanisms covering inhalation
- absorption
- ingestion.

Common diseases may include the fundamental causes and effects of:
- lung disease
- chronic bronchitis
- emphysema
- heart disease
- pulmonary oedema
- pulmonary fibrosis
- cancers
- hypersensitivity
- occupational asthma
- alveolitis
- dermatitis
- allergic contact dermatitis
- skin cancer
- poisoning
• nervous system disease
• circulatory system disease.

**Common disease** related to routes of exit may include those involving:
• liver
• kidney
• bladder
• reproductive systems
• cover the latency potential.

**Stressors** (cause of stress) may include:
• environmental factors
• bad workplace design
• work hazards
• job design
• job monotony
• contractual conditions
• esteem values
• relationship difficulties
• lack of control
• physical impairments.

**Stress effects** may include:
• fatigue
• anxiety
• hypertension
• depression
• hostility and aggression
• psychosomatic complaints
• neuroses

They may be associated / linked with:
- bronchial asthma
- nervous rashes
- diabetes
- some cancers.

**Medical matters** may include:
• common medical examination requirements
• frequency of examinations
• hot / cold work replacement assessment.

**Common medical examination coverage** may include:
• medical history
• physical characteristics (height, weight, blood pressure, vision, hearing)
• physical examination (central nervous system, digestive system, heart and lungs, muscular-skeletal system)
• biological measurement (urinalysis, blood tests)
• electrocardiograms
• stress tests.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

• knowledge of procedures, requirements and instructions to implement and monitor health and hygiene management systems appropriate to a mine site

• implementation of appropriate procedures and techniques for the efficient and effective implementation and monitoring of health and hygiene management systems appropriate to a mine site, while complying with site safety, environmental, quality and communication requirements. This will include:
  a. interpreting and communicating information on health and hygiene matters
  b. identifying, explaining and responding to the fundamentals of human disease and injury
  c. identifying, anticipating and responding to situations involving stress, shift work effects and drug and substance abuse
  d. identifying, anticipating and responding to health and hygiene hazards
  e. implementing health and hygiene measures within the mine’s human resource recruitment, management and administrative systems and processes
  f. implementing health and hygiene measures within mining and operational infrastructure, planning and management processing
  g. implementing health and hygiene measures within the mine’s equipment materials procurement, management and maintenance systems and procedures
  h. implementing health and hygiene measures within safety hazard management plans and processes
  i. implementing the mine’s health and hygiene training systems and programs.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

• legislative and industry health and hygiene standards and compliance requirements
• health and hygiene systems development processes and techniques
• procedures and techniques for establishing health and hygiene objectives and criteria
• health and hygiene management systems information procedures
• risk management and control theory and processes
• fundamentals of human disease and injury
• causes, symptoms and impacts of stress on employees
• potential impacts of drug and substance abuse
• individual medical standards and examination systems
• rehabilitation processes and techniques
• personnel protective equipment and measures
• manual handling codes and practices
• sanitation and hygiene systems and procedures
• mine hazards associated with hazardous substances
• chemical information management systems (MSDS or equivalent)
• health hazards associated with atmosphere and the likely impacts on personnel
• atmosphere and dust control and protection systems
• health hazards and controls associated with mining processes and the likely impacts on personnel
• health hazards and controls associated with exposure to heat / cold conditions
• health hazards associated with:
  - explosives
  - radiation and radiation sources
  - equipment and plant
  - lighting
  - vibration
  - noise
• health and hygiene training requirements and systems.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
• access, interpret and apply technical information
• communicate ideas and information
• plan and organise activities
• prepare and document systems and procedures
• apply risk management processes and techniques
• conduct enquiries / investigations and prepare reports
• access, evaluate and apply data from monitoring systems and equipment / plant work with others and in teams
• validate training analysis results
• apply review and audit processes and techniques.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.
Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
- simulation/scenario analysis
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1008A Conduct safety and health investigations

Unit Descriptor
This unit covers the application of safety and health investigative processes at the operational level, including the identification and collection of evidence, the analysis of evidence to identify the reasons for and results of the occurrence or situations, and the identification and documentation of courses of action to resolve and/or prevent re-occurrence of the issues or problems.

This is a new unit developed from the Queensland Mining S2 unit of competency.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Determine the investigation objectives.</td>
<td>1.1 Determine the scope of the investigation to ensure pre and post incident timeframe is considered, consistent with legislative requirements and site standard.</td>
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<tr>
<td></td>
<td>1.2 Determine the proposed investigation objectives from an analysis of the available information and factors.</td>
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<td></td>
<td>1.3 Test the proposed objectives and clarify the scope of the investigation.</td>
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<td></td>
<td>1.4 Ensure the final objectives and scope of the investigation will be achievable within available resources and authority constraints.</td>
</tr>
<tr>
<td>2 Gather information.</td>
<td>2.1 Maintain site security and integrity of evidence in accordance with legislative and site requirements.</td>
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<td></td>
<td>2.2 Plan and prepare for the systematic collection of information.</td>
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<td></td>
<td>2.3 Schedule information collection and completion to ensure minimum backtracking or repeat actions.</td>
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<td></td>
<td>2.4 Ensure methods used to collect and examine information, including interviewing and recording, meet appropriate standards and legislative requirements.</td>
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<tr>
<td></td>
<td>2.5 Collect, test and organise all information appropriate to the investigation according to legislative and/or industry standards.</td>
</tr>
<tr>
<td>3 Evaluate information.</td>
<td>3.1 Assess and evaluate information for its validity and reliability and organise as evidence to aid decision making.</td>
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</tbody>
</table>
| | 3.2 Undertake further research where information is
unclear or inadequate, and correct the discrepancy/deficiency.

3.3 Analyse the evidence to determine the causes of the incident.

3.4 Draw conclusions from the relevant evidence based on reasoned argument and balance of probability or other agreed standard.

3.5 Ensure the findings address the factual objectives established for the investigation.

4 Identify courses of action.

4.1 Frame options for the courses of action to address or respond to the findings of the investigation.

4.2 Provide options in a form which meets the audience requirements, can be easily understood and enable the selection of the most appropriate course of action.

4.3 Ensure the course of action selected will resolve the issues or problems recognised by the investigation and reduce the probability of recurrence.

4.4 Ensure the selected course of action can be implemented in accordance with relevant national, state and industry standards.

5 Prepare and present investigation reports.

5.1 Prepare investigation reports in accordance with specified standards.

5.2 Present reports in a format which ensures that findings, causes, options and courses of action can be readily understood by audience.

5.3 Present reports, including findings and recommendations, to the required audience.

5.4 Review the investigation process and pass recommendations for process changes and improvements to the appropriate authority.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Investigations may involve a range of issues but will generally be related to:
- accidents, incidents or near misses
- safety and health systems and issues
- safety aspects of technical processes and procedures
- safety aspects of equipment specifications and performance definition
Investigation report formats may be established on a site basis but are likely to include:
- objective(s)
- general overview
- research and information collection methodology
- analytical criteria
- findings, including essential and contributing factors
- recommendations
- follow-up actions
- the records of all relevant evidence.

Investigation recommendations may include:
- safety management systems
- processes and procedures
- behaviours/actions
- equipment and materials
- working environment.

Information collection may include:
- reconstruction of events
- interviews
- statements
- audio recording
- photographs
- scale diagrams
- accessing other formal information sources.

Information sources may include:
- applicable Commonwealth/State/Territory legislation and codes of practice relating to the industry, dangerous and hazardous goods, environmental protection and OH&S
- emergency procedures
- enterprise quality assurance procedures
- manufacturer documentation and handbooks
- material safety data sheets
- mine communications, management and inventory systems
- mine safety management systems
- mines Rescue Service publications and information
- operations manuals or equivalent
- personal and work area work procedures and practices
- quality work specifications and procedures
- workplace operating procedures and policies.

Site security may require:
- signage
- barricades
- actions to treat and/or comfort victims and witnesses
- temporary engineering and stability measures
- security personnel.
• other relevant measures
This is in order to:
• create a safe environment
• ensure the integrity of evidence.
Interview techniques and processes may need to be:
- managed to avoid prejudicing individual legal rights
- varied to avoid exacerbating post traumatic stress or similar symptoms for witnesses and involved parties.

Recording and reporting requirements are in accordance with legislative and mine policies and procedures.

Analysis of information may be divided into five main areas, including:
- people
- environment
- equipment
- procedures
- organisation.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to conduct safety and health investigations appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective conduct of safety and health investigations appropriate to a mine site, while complying with site safety, environmental, quality and communication requirements. This will include:
  a. Ability to transfer safety and health investigations to changing circumstances and to respond to unusual circumstances in the critical aspects of:
     a.1. determining investigation objectives
     a.2. carrying out research functions
     a.3. evaluating research findings
     a.4. identifying courses of action
     a.5. preparing and presenting investigation reports.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- relevant legislation and regulations
- the topic or subject area which is the target for the investigation
- the theory of safety and health investigative research and analysis
- the symptoms and possible immediate effects of post traumatic stress in an investigation situation
- the appropriate mining context
- site procedures and conventions related to safety and health investigations
- site risk management processes and their applications
• the conventions and requirements for written communications, including report writing.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
• locate, interpret and apply relevant legislative and operational information
• identify and/or confirm the linkages between factors and outcomes, causes and effects and direct/indirect causal relationships
• apply technical literacy and communicate sufficiently to interpret and apply common industry terminology, and interpret work procedures and processes
• speak in plain English and communicate orally with supervisors and other employees
• question and listen actively, eg when obtaining information of technical working practices
• write effectively to allow report writing
• plan and organise sufficiently to prepare and apply investigative processes covered in this unit
• apply teamwork skills sufficient to involve and engage the employers/supervisors in the investigation processes
• solve problems to assess technical mining issues
• apply presentation skills to deliver report to various levels of industry.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.
The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**

Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1009A Communicate information

Unit Descriptor
This unit covers the function required to effectively communicate information with other persons in the mining industry. This includes communicating verbally, communicating in written and report form, participating in meetings, making presentations, and participating in operational level negotiations.

This unit is a new unit developed from the Queensland Mining S3 unit of competency.

Employability Skills

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT PERFORMANCE CRITERIA

1 Communicate information orally.

1.1 Analyse and clarify the purpose of the oral communication with the other parties.

1.2 Adopt a suitable oral communication style to match the communication purpose and audience.

1.3 Deliver oral information that is clear, succinct and unambiguous.

1.4 Check the received information with the listener(s) to ensure it has been received accurately and understood where oral information has been given to others.

1.5 Listen carefully and intently to oral information that is received from others.

1.6 Check the meaning with the speaker where oral information has been received from others, to ensure that it has been received accurately and understood.

2 Communicate information in writing.

2.1 Analyse and confirm the purpose or objective of the written communication.

2.2 Format and present the document according to current industry and enterprise practice.

2.3 Organise the document logically so it is structured and balanced according to the purpose, audience and context.

2.4 Ensure the written language is applicable to the communication purpose and audience.

2.5 Ensure the written information is clear, succinct and unambiguous.

2.6 Ensure conclusions reached are logically justified and reflect the purpose of the written communication.

2.7 Complete preparation and the communication process
3 Achieve meeting outcomes.

3.1 Prepare for the meeting to cover all requirements in a timely and effective manner.

3.2 Clarify the purpose of a meeting with all those participating.

3.3 Conduct the meeting effectively in accordance with industry and mine site conventions and rules of procedure.

3.4 Record accurately the outcomes of an official meeting and promptly provide minutes of the meeting to all participants.

3.5 Document accurately all required action flowing from decisions reached at a meeting.

3.6 Notify promptly persons responsible for implementing action from decisions at a meeting and confirm in writing details of the required action.

3.7 Take appropriate follow-up action to ensure that all decisions of a meeting are acted upon as required.

4 Make a presentation.

4.1 Identify and clarify the purpose of a presentation and where appropriate, confirm with the intended audience.

4.2 Organise the information to be communicated in a presentation and structure it in accordance with contemporary presentation techniques and practice.

4.3 Identify, evaluate and select the media resources available to use for the presentation.

4.4 Organise and prepare presentation aids in advance, in accordance with recognised standards of good practice.

4.5 Check presentation resources and presentation aids where possible, prior to the presentation to ensure that they are functioning properly.

4.6 Make the presentation as planned with appropriate response to the reactions and feedback provided by the audience.

4.7 Evaluate the outcomes of the presentation and act upon the findings in accordance with mine systems and procedures.

5 Participate in negotiations.

5.1 Make adequate preparation for the negotiation in

within any specified time frame and to industry and site requirements.
5.2 Select a suitable negotiation strategy in accordance with the relevant requirements, including the location, time and approach to be taken.

5.3 Conduct negotiations in accordance with the planned approach.

5.4 Review negotiation outcomes in terms of desired outcomes of the parties and initiate suitable further action, if required, according to legislative and mine requirements.

5.5 Carry out all required follow-up action to the negotiations, including further discussions with the parties if necessary.

5.6 Document outcomes of the negotiation in accordance with legislative and mine requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Communication may be:
- face to face
- in writing
- by telephone
- by electronic means
- formal
- informal.

Meeting preparation may include:
- arrangements for the venue
- issue of the notice of meeting to attendees and other interested parties
- circulation of agenda and other papers
- arrangements for visiting speakers
- venue set up on the day.

Meeting conduct may include:
- the handling of apologies
- minutes
- motions
- discussion
- voting
- recording of outcomes according to industry
- mine site conventions and rules of procedure.

Presentation resources may include:
• the hardware aspects of projectors
• computers
• screens
• telecommunications equipment
• audio/visual equipment.

Presentation aids may include:
• overhead transparencies
• slides
• computer software materials
• presentation notes
• hand-outs
• computer disks
• videos.

Negotiation preparation may include:
• full consideration of the subject matter
• the significance of the outcomes for the parties involved
• the facts
• the issues and options
• the perceived/anticipated positions of the parties involved.

Written communication may be prepared and stored in hard copy or electronic form and may include:
• memos
• letters
• reports.

EVIDENCE GUIDE

Critical Aspects of Evidence
• knowledge of procedures, requirements and instructions to communicate information on a mine site
• implementation of appropriate procedures and techniques for the efficient and effective communication of information on a mine site, while complying with site safety, environmental, quality and communication requirements. This will include:
  a. Ability to transfer communication processes to changing circumstances and to respond to unusual circumstances in the critical aspects of:
     a.1. conducting oral communication in the workplace
     a.2. communicating in writing
     a.3. achieving meeting outcomes
     a.4. conducting presentations
     a.5. negotiating issues in the workplace.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- mining legislation and regulations
- the theory of industry based communication requirements and systems
- the topic or subject area which is the target for the communication
- the factors for effective oral communication
- the site conventions and requirements for written communications, including report writing
- meeting procedures and follow-up requirements
- preparing for and conducting a presentation
- basic negotiating techniques and their application.

**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of:
- research and interpretative skills to locate, interpret and apply relevant operational information
- technical literacy and communication skills sufficient to interpret and apply common industry terminology, and interpret work procedures and processes
- plain English speaking and communication skills in relation to oral communications with supervisors and other employees both informally and in making formal presentations
- questioning and active listening skills, eg when obtaining information of technical working practices
- writing skills to allow effective written communications in the workplace
- effective listening and interpersonal skills to enable effective communication in meetings and negotiations
- planning and organising skills sufficient to prepare and manage communication processes covered in this unit
- teamwork skills sufficient to involve and engage the employers/supervisors in the communication processes
- problem solving skills to assess technical mining issues.

**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**

Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1010A Assess and implement life support systems and stabilise casualties

Unit Descriptor
This unit covers the competency needed by rescue team members to safely gain access to casualties and use relevant equipment to implement life support techniques to stabilise casualties in situ before extrication.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT PERFORMANCE CRITERIA

1. Assess danger to rescuers, bystanders and casualty.
   1.1 Identify hazards to rescue personnel and other personnel.
   1.2 Assess situation to ensure safety of team and other persons.
   1.3 Take appropriate actions to ensure safety of team and affected persons.
   1.4 Re-assess hazards and relevant measures implemented.
   1.5 Implement restricted area protocols/methods.

2. Access and cooperate with emergency services.
   2.1 Assess the incident to determine the emergency service type to be called in.
   2.2 Contact support services and call in to mine emergency protocols.
   2.3 Establish the roles and responsibilities of the emergency service and communicate to rescue team members.
   2.4 Establish the roles and responsibilities of rescue team members in relation to emergency service people and communicate to both parties.

3. Gain access to casualty.
   3.1 Apply TRIAGE principles to multiple-casualty situations.
   3.2 Assess situation to determine the appropriate safe method of access.
   3.3 Identify and obtain appropriate equipment.
   3.4 Use equipment to gain access to people according to manufacturer recommendations and within the guidelines of Accredited Rescue Services to ensure the health and safety of all affected people.
4 Assess casualties’ condition and implement life support systems.
   4.1 Perform primary and secondary assessments for basic life support to an industry accepted standard.
   4.2 Apply identified life support techniques.
   4.3 Continuously monitor casualties and record vital signs.
   4.4 Record all relevant information and communicate to relevant officials and emergency services.

5 Stabilise casualty in Situ.
   5.1 Maintain implemented life support techniques to keep casualty in a stable condition.
   5.2 Continuously monitor and re-assess casualty’s condition and take appropriate life support actions.
   5.3 Continuously monitor casualty’s vital signs and take action to maintain casualty in a stable condition.

6 Hand over to emergency services.
   6.1 Hand over casualty/s to relevant emergency service’s personnel.
   6.2 Hand over record of casualty/s vital signs.
   6.3 Assist relevant emergency service with life support if requested.

7 Restore and refurbish equipment to operational condition.
   7.1 Inspect all equipment used for any damage or contamination sustained in the operation.
   7.2 Dispose of contaminated medical waste as per Australian Standards.
   7.3 Repair or replace all defective equipment to meet manufacturer specifications or Australian Standards.
   7.4 Clean and sterilise equipment to meet manufacturer specifications or Australian Standards.
   7.5 Return the rescue equipment to operational readiness.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Hazards may include:
- environmental
- electrical
- hazardous substances.

Situations may include:
• heights
• depths
• plant and equipment entrapment
• environment
• light vehicles
• heavy vehicles.

**TRIAGE principles** and practices used must be recommended by recognised authorities such as St John.

**Equipment** used may include:
• pre-use checks / tests
• operation use checks / tests
• post-use checks / tests.

**Accredited emergency services** are all agencies associated with the State Rescue Board including:
• Police Rescue
• Ambulance Rescue
• Fire Brigade
• Bush Fire Council
• Volunteer Rescue Association (VRA)
• State Emergency Services (SES).

**Primary and secondary assessment** is an overall assessment and treatment of injuries to a person and further assessment and treatment after monitoring.

**Life support** requirements include, but are not limited to:
• airway management
• haemorrhage control
• stabilisation of injuries.

**Vital signs** include, but are not limited to:
• respiration
• pulse
• blood pressure
• conscious level.

**Mining surface operations** may include:
• open-cut mines
• coal preparation plants
• surface operations of underground mines
• quarries.

**External agencies** may include:
• contractors
• insurance companies
• suppliers
Hazards inherent to open-cut mining methods and equipment may include:

- electrical
- mechanical
- magnitude / size of equipment
- heights / depths
- wall collapse
- engulfment
- traffic movements
- water
- weather conditions
- chemicals
- night conditions
- bulk fuel storage and transportation
- unsafe working practices
- topography
- explosives.

Industry accepted standards typically include, but are not limited to, Ambulance services and St John.

Access equipment may include:

- hydraulic rescue equipment
- pneumatic lifting equipment
• crowbars
• hand tools
• hacksaws
• abrasive saws
• thermal cutting equipment
• tirfor
• oxygen therapy / resuscitation equipment.

**Recording** is carried out to statutory and mine-specific guidelines and formats.

**Mine site plant and equipment** may include:
• scrapers
• drills
• draglines
• shovels
• trucks
• bulldozers
• loaders
• stackers
• reclaimers
• conveyors crushers
• cranes.

**Communications** may include:
• First Aid reports
• 2-way radio
• phone
• mobile phone
• fax
• e-mail.

**Returning equipment to operational readiness** may include:
• inspection
• cleaning/sterilisation
• repair
• replacement
• re-fill to manufacturer and suppliers recommendations.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
• knowledge of procedures, requirements and instructions to assess and implement life support techniques and stabilise casualties on a mine site
• implementation of appropriate procedures and techniques for the efficient and effective assessment and implementation of life support techniques and stabilisation of casualties on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. hazard / risk identification and control
  b. selection and operation of access equipment
  c. life support techniques and equipment
  d. stabilisation techniques and procedures
  e. TRIAGE
  f. communication systems, equipment and protocols.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
• TRIAGE principles, protocols and techniques
• basic life support
• primary assessment
• secondary assessment
• hazard/risk management principles and practices, including assessment and control
• CISD procedures and agencies
• mine site plant type and construction in relation to access methods and equipment
• accident investigations
• equipment used for gaining access to casualties – types, selection, application, safe method of operation, fault-finding
• recording systems and protocols (sequence of events and actions taken)
• liaison protocols with support services
• communication systems and protocols
• types, role and responsibilities of emergency services and mine officials.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
• select appropriate types of equipment and apply safe methods of operation to gain access to casualties
• assess and control hazards and associated risks
• apply TRIAGE
• apply basic life support to casualties
• apply primary assessment to casualties
• fault-find and remedy equipment
• record operations for incident reports
• operate communication systems and observe communication protocols
• gain access to and liaise with emergency services and mine officials.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.
Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.
Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1011A   Extricate and transport people involved in incidents

Unit Descriptor
This unit covers the operation of extrication equipment and methods of extricating casualties and transport them to a place of safety, in a *mining surface operation*.

**Employability Skills**
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Select extrication method. 1.1 Assess situation to determine the appropriate method and procedures of extrication with due recognition of entrapped person.</td>
</tr>
<tr>
<td>2</td>
<td>Access and cooperate with <em>emergency services</em>. 2.1 Assess the incident to determine the emergency service type to be called in. 2.2 Contact emergency services and call in to mine emergency protocols. 2.3 Establish the roles and responsibilities of the emergency service and communicate to rescue team members. 2.4 Establish the roles and responsibilities of rescue team members in relation to emergency service people and communicate to both parties.</td>
</tr>
<tr>
<td>3</td>
<td>Establish extrication system. 3.1 Identify and obtain appropriate equipment and check for operational ability. 3.2 Set up equipment to extricate casualty according to manufacturer recommendations and within the guidelines of Accredited Rescue Services. 3.3 Test the extrication system within the guidelines of accredited rescue services before any casualty is lifted or lowered.</td>
</tr>
<tr>
<td>4</td>
<td>Extricate casualty. 4.1 Select and use equipment and techniques according to manufacturer recommendations to extricate people within the guidelines of Accredited Rescue Services.</td>
</tr>
<tr>
<td>5</td>
<td>Re-assess condition of casualty and stabilise. 5.1 Perform primary and secondary assessments to Mines Rescue Advisory Standard to check casualty’s condition. 5.2 Apply the identified life support requirements.</td>
</tr>
</tbody>
</table>
5.3 Continuously monitor casualty and record vital signs.
5.4 Communicate all relevant information.
6 Transport casualty to appropriate facility.

6.1 Assess transport resources and obtain additional assistance if required.
6.2 Prepare stretcher patients for safe transport.
6.3 Employ recommended techniques and procedures to Mines Rescue Advisory Standard to transport casualty to medical facility.
6.4 Communicate incident site status of personnel and equipment to incident controller.

7 Hand over to emergency services.

7.1 Hand over casualty/s to relevant emergency service’s personnel.
7.2 Hand over record of casualty/s vital signs.
7.3 Assist relevant emergency service with life support if requested.

8 Restore and refurbish equipment to operational condition.

8.1 Inspect all equipment used for any damage or contamination sustained in the extrication.
8.2 Dispose of contaminated medical waste as per Australian Standards.
8.3 Repair or replace all defective equipment to meet manufacturer specification or Australian Standards.
8.4 Clean and sterilise equipment to meet manufacturer specifications or Australian Standards.
8.5 Tag and quarantine unusable equipment.
8.6 Return the rescue equipment to operational readiness.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Extrication equipment may include:
- hydraulic rescue equipment
- pneumatic lifting equipment
- crowbars
- hand tools
- hacksaws
- abrasive saws
- thermal cutting equipment
- tirfor
- oxygen therapy / resuscitation equipment
- rescue boards
• first aid equipment
• cervical collars
• stretchers
• roping equipment
• ladders
• stretchers including:
  - Stokes
  - Ferno Washington
  - SKED
  - field
• equipment including:
  - pre-use checks/tests
  - operational use checks/tests
  - post-use checks/tests.

Transport may include
• ambulance
• man-haul vehicle.

Mining surface operations may include:
• open-cut mines
• coal preparation plants
• surface operations of underground mines
• quarries.

Hazards may include:
• environmental
• electrical
• hazardous substances.

Hazards inherent to surface mining methods and equipment may include:
• electrical
• mechanical
• magnitude / size of equipment
• heights / depths
• wall collapse
• engulfment
• traffic movements
• water
• weather conditions
• chemicals
• night conditions
• bulk fuel storage and transportation
• unsafe working practices
• topography
• explosives.
Support services may include:
- contractors
- insurance companies
- suppliers
- local community
- manufacturer
- inspectorate
- Mines Rescue Board
- police
- Mines Rescue Services
- fire brigades
- ambulance
- medical staff
- hospitals
- CISD organisations
- catering
- clergy
- state and federal government
- media
- coroner’s representative
- security services
- solicitors
- district check inspector
- other mines
- engineers
- drill rigs
- forensic.

Extrication situations may include:
- heights
- depths
- plant and equipment entrapment
- light vehicles
- heavy vehicles.

Communications may include:
- First Aid reports
- 2-way radio
- phone
- mobile
- phone
- fax
- e-mail
EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to extricate and transport people involved in incidents on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective extrication and transport of people involved in incidents on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. casualty extrication systems and methods
  b. extrication equipment selection and safe operation
  c. life support and stabilisation
  d. monitoring of casualty condition
  e. transport of casualties to safety
  f. communication systems, equipment and protocols.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- extrication equipment – types, construction and operation
- manufacturer recommendations for safe use and care of extrication equipment
- Accredited Rescue Service guidelines for the operation and care of extrication equipment
- basic life support
- primary assessment
- secondary assessment
- cross-infection precautions
- hazard / risk management principles and practices, including assessment and control
- types and availability of transport resources
- types and availability of medical facilities
- lashing techniques for stretchers
- safe operation of extrication equipment defined in the Unit Range Statement
- systems and methods of extrication
- location of extrication equipment
- inspection and refurbishment of extrication equipment
- structural design of mine plant and equipment
- blasting sequences
- hazards of open-cut operations
- hazards associated with large mobile mine equipment
- mine traffic procedures and rules
- accident investigation techniques and legislation
- liaison protocols with support services
- communication systems and protocols
Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- identify extrication equipment to suit situation and check for operational readiness
- assess and control hazards and associated risks
- apply basic life support to casualties
- apply primary assessment to casualties
- apply secondary assessment to casualties
- locate and obtain transport resources
- apply stretcher lashing techniques
- safely operate extrication equipment defined in the Unit Range Statement
- apply systems and methods of extrication
- locate extrication equipment
- operate communication systems and observe communication protocols
- operate radios during the extrication operation
- gain access to and liaise with support services and mine officials
- refurbish and quarantine extrication equipment.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.
Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1012A Maintain bathroom hygiene

Unit Descriptor
This unit covers the provision of mine site bathroom services.

Units Replaced
This unit replaces the following units:
- MNC.U92.A Maintain bathroom hygiene.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Plan and prepare for work.</td>
</tr>
<tr>
<td>1.1</td>
<td>Obtain, interpret and clarify/confirm work requirements before proceeding.</td>
</tr>
<tr>
<td>1.2</td>
<td>Obtain and prepare materials and resources required for work in accordance with the work requirements and relevant manufacturer or site requirements.</td>
</tr>
<tr>
<td>1.3</td>
<td>Access and apply safety information and procedures throughout the work.</td>
</tr>
<tr>
<td>2</td>
<td>Provide bathroom services.</td>
</tr>
<tr>
<td>2.1</td>
<td>Establish and monitor a safe work environment throughout the job.</td>
</tr>
<tr>
<td>2.2</td>
<td>Administer service contracts in accordance with site specific requirements.</td>
</tr>
<tr>
<td>2.3</td>
<td>Clean and maintain bathroom with equipment provided in accordance with site and legislative requirements.</td>
</tr>
<tr>
<td>2.4</td>
<td>Maintain bathroom equipment and cleaning accessories in accordance with site requirements.</td>
</tr>
<tr>
<td>2.5</td>
<td>Maintain security in accordance with site requirements.</td>
</tr>
<tr>
<td>2.6</td>
<td>Dispose of hazardous and environmentally sensitive materials in accordance with site procedures.</td>
</tr>
<tr>
<td>2.7</td>
<td>Maintain records in accordance with site requirements.</td>
</tr>
</tbody>
</table>

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Work requirements may be in the form of:
- shift briefings
• handover details
• work orders
• safe working procedures (or equivalent).
Work requirement details may include:
- cleaning and maintenance schedules
- notices of personnel rosters
- notice of visitors requiring support
- defect reports on equipment / accessories
- coordination requirements / issues.

Materials may include:
- protective clothing
- boots
- chemicals
- detergents
- linen.

Safety information and procedures may be contained in:
- legislation and regulations
- relevant Australian Standards
- management plan
- OH&S policy
- codes or practice
- manufacturer instructions
- safe working or job procedures or equivalents.

Service contracts may include:
- laundry contracts
- clothing issues.

Equipment may include:
- heaters
- air controllers
- dryers
- vacuum cleaners
- floor brushes
- high pressure cleaners.

Cleaning accessories may include:
- heating equipment
- showers
- taps
- toilets
- kit baskets / hangers.

Hazardous and environmentally sensitive materials may include:
- chemicals
- soaps
- other cleaning materials.
Bathroom maintenance may include repairing:
- baskets
- rollers
- lockers
- doors.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to maintain bathroom hygiene on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective maintenance of bathroom hygiene on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. identifying, obtaining and maintaining stocks of materials and consumables
  c. maintaining the hygiene of the bathroom to the prescribed standard
  d. maintaining bathroom equipment in an operable condition
  e. maintaining effective bathroom temperatures / environment
  f. administering service contracts
  g. disposing of environmentally sensitive / hazardous materials.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- site personal and operational safety procedures
- mine operating procedures
- mine site chemical substance information system
- bathroom equipment characteristics, uses and limitations
- manufacturer and site equipment maintenance systems
- stock control procedures related to the bathroom operations
- relevant legislative and enterprise records systems
- site environmental requirements and constraints related to the bathroom.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
- apply operational safety requirements
- access, interpret, apply and communicate technical information
- plan maintenance and servicing schedules
- dispose of environmentally sensitive materials
- communicate and negotiate with contractors / suppliers and mine employees
- maintain records
• maintain and perform minor repairs on equipment
• use relevant hand tools.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
• observation of processes and procedures
• oral and/or written questioning on required knowledge and skills
• testimony from supervisors, colleagues, clients and/or other appropriate persons
• inspection of the final product or outcome
• a portfolio of documentary evidence
• simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNGG1013A  Apply initial response First Aid

Unit Descriptor
This unit deals with the provision of essential First Aid, using basic life support measures, when responding to an emergency. The unit does not deal with complex incidents or casualties.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Assess the situation.</td>
</tr>
<tr>
<td>1.1</td>
<td>Identify physical hazards to own and others' health and safety.</td>
</tr>
<tr>
<td>1.2</td>
<td>Minimise immediate risk to self, and health and safety of the casualty, by controlling hazards in accordance with site and OHS requirements.</td>
</tr>
<tr>
<td>1.3</td>
<td>Assess casualty's vital signs and physical condition in accordance with workplace procedures.</td>
</tr>
<tr>
<td>2</td>
<td>Apply initial response First Aid.</td>
</tr>
<tr>
<td>2.1</td>
<td>Provide First Aid management in accordance with established First Aid procedures.</td>
</tr>
<tr>
<td>2.2</td>
<td>Reassure casualty in a caring and calm manner and make comfortable using available resources and equipment.</td>
</tr>
<tr>
<td>2.3</td>
<td>Seek First Aid or appropriate medical assistance from appropriate personnel using relevant communication media and equipment, to site requirements.</td>
</tr>
<tr>
<td>2.4</td>
<td>Monitor and respond to casualty's condition in accordance with effective First Aid principles and site procedures.</td>
</tr>
<tr>
<td>2.5</td>
<td>Finalise casualty management according to casualty's needs and First Aid principles.</td>
</tr>
<tr>
<td>3</td>
<td>Record and report incident.</td>
</tr>
<tr>
<td>3.1</td>
<td>Record details of casualty's physical condition, changes in conditions, management and response to management in line with organisational procedures.</td>
</tr>
<tr>
<td>3.2</td>
<td>Convey details of casualty's condition and management activities to emergency services/relieving personnel.</td>
</tr>
<tr>
<td>3.3</td>
<td>Prepare reports to supervisors in a timely manner, presenting all relevant facts according to established site procedures.</td>
</tr>
</tbody>
</table>
RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Physical hazards may include:
- workplace hazards
- environmental hazards
- proximity of other people
- hazards associated with the casualty management processes.

Risks may include:
- worksite equipment, machinery and substances
- environmental risks
- bodily fluids
- risk of further injury to the casualty
- risks associated with the proximity of other workers and bystanders.

Initial response First Aid may include:
- cardio-pulmonary resuscitation
- expired air resuscitation
- bleeding control
- basic patient management
- spinal injury awareness
- immediate burns treatment
- unconscious casualty procedure
- identification of fractures
- sprains
- strains
- the treatment of shock.

Vital signs may include:
- breathing
- circulation
- consciousness.

First Aid management may need to account for:
- workplace policies and procedures
- industry/site specific regulations, codes etc.
- OH&S requirements
- state and territory workplace health and safety requirements
- allergies the casualty may have
- location and nature of the workplace
- environmental conditions such as: electricity, biological risks, weather, motor vehicle accidents
- location of emergency services personnel
- use and availability of first aid equipment and resources
• infection control.

Resources and equipment may include:
• pressure bandages
• thermometers
• first aid kit
• eyewash
• thermal blankets
• pocket face masks
• rubber gloves
• dressing
• spacer device
• cervical collars.

Communication media and equipment may include:
• mobile phone
• UHF/VHF radio
• flags
• flares
• two-way radio
• email
• electronic equipment.

Casualty's condition may include:
• abdominal injuries
• allergic reactions
• bleeding
• burns - thermal, chemical, friction, electrical
• cardiac conditions
• chemical contamination
• cold injuries
• crush injuries
• dislocations
• drowning
• envenomation - snake, spider, insect and marine bites
• environmental conditions such as hypothermia, dehydration, heat stroke
• eye injuries
• fractures
• head injuries
• minor skin injuries
• neck and spinal injuries
• needle-stick injuries
• poisoning and toxic substances
• asthma and/or choking
• shock
• smoke inhalation
• soft tissue injuries, including sprains, strains, dislocations
• substance abuse, including drugs
• unconsciousness, including not breathing and no pulse.

Established **First Aid principles** may include:
• checking the site for danger to self, casualty and others and minimising the danger
• checking and maintaining the casualty's airway, breathing and circulation.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
• knowledge of procedures, requirements and instructions to apply initial response first aid appropriate to a mine site
• implementation of appropriate procedures and techniques for the efficient and effective application of initial response first aid appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. assessing incident situations
  b. assessing the condition of casualties
  c. first aid management
  d. administering initial response first aid
  e. identifying and reporting of incidents.

**Required Knowledge**
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
• initial response first aid
• manual handling procedures
• incident reporting systems and procedures
• basic anatomy and physiology
• dealing with confidentiality
• knowledge of the First Aiders' skills and limitations
• OHS legislation and regulations
• how to gain access to and interpret material safety data sheets (MSDS)
• basic anatomy and physiology
• duty of care
• resuscitation
• bleeding control
• care of unconscious
• legal requirements
• airway management.
Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
- access, interpret and apply relevant safety rules and procedures
- prepare and process reports
- show assertiveness
- communicate effectively
- make decisions
- apply infection control measures.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.
Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1025A  Access, update and retrieve simple computerised information

Unit Descriptor
This unit covers the accessing, updating and retrieval of data held in a computer.

Units Replaced
This unit replaces the following units:
• MNC.G25.A Access, update and retrieve simple computerised information.

Links outside this unit
The work described in this unit covers a significant amount of the work described in:
• BSBCMN205A Use business technology.
• ICAITU128A Operate a personal computer.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Prepare for work.</td>
</tr>
<tr>
<td></td>
<td>1.1 Identify, analyse and confirm work requirements.</td>
</tr>
<tr>
<td></td>
<td>1.2 Observe occupational health and safety requirements for screen based equipment and ergonomic work stations.</td>
</tr>
<tr>
<td>2</td>
<td>Access and update Information.</td>
</tr>
<tr>
<td></td>
<td>2.1 Turn on computer and access system in accordance with manufacturer instructions to eliminate the risk of equipment malfunction.</td>
</tr>
<tr>
<td></td>
<td>2.2 Operate keyboard using appropriate typing techniques.</td>
</tr>
<tr>
<td></td>
<td>2.3 Select appropriate software from the menu to access designated program.</td>
</tr>
<tr>
<td></td>
<td>2.4 Correctly identify and open files.</td>
</tr>
<tr>
<td></td>
<td>2.5 Update information against pre-set formats and fields.</td>
</tr>
<tr>
<td></td>
<td>2.6 Save information.</td>
</tr>
<tr>
<td>3</td>
<td>Retrieve information.</td>
</tr>
<tr>
<td></td>
<td>3.1 Locate information to be retrieved in the file.</td>
</tr>
<tr>
<td></td>
<td>3.2 Retrieve information using prescribed systems, sequences and appropriate keyboard techniques.</td>
</tr>
<tr>
<td></td>
<td>3.3 Check information to ensure it meets the original requirements.</td>
</tr>
<tr>
<td>4</td>
<td>Close file.</td>
</tr>
<tr>
<td></td>
<td>4.1 Close file in accordance with systems instructions.</td>
</tr>
<tr>
<td></td>
<td>4.2 Exit program in accordance with designated procedures.</td>
</tr>
</tbody>
</table>
5 Shut down equipment.

5.1 Exit system following prompts in order to preserve the data.

5.2 Carry out general housekeeping, including cleaning, covering and where necessary, securing of equipment.

5.3 Store software and disks in accordance with site procedures where used.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Work Requirements may be in the form of:
• shift briefings
• handover details
• work orders
• safe work procedures (or equivalent).

Computer system access may require the use of passwords for security.

Information retrieval may include that from:
• stores/supply system
• maintenance management systems
• training records
• personnel administration files
• safety information.

Keyboards may include:
• standard keyboards
• equipment keypads
• mouse
• joystick
• touch screens.

Information retrieval may be by:
• screen reading
• printing (to the pre-set print station)
• audio.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
• knowledge of procedures, requirements and instructions to access, update and retrieve simple computerised information
• implementation of appropriate procedures and techniques for the efficient and effective access, updating, and retrieval of simple computerised information while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on computer operations
  c. completing start-up and shut-down procedures
  d. completing operator maintenance
  e. completing essential functions including:
     e.1. accessing and updating information
     e.2. retrieving information
     e.3. closing files.

**Required Knowledge**
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
• occupational health and safety standards and requirements for keyboard and screen based equipment
• basic functions and components of a typical computing systems
• the major computerised information systems relevant to the work area, their purpose and external appearance
• basic systems access and exit information
• site computer system security measures
• keyboard functions
• site computing systems
• general housekeeping procedures.

**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
• access, interpret and apply technical information related to this function
• apply keyboard and screen based occupational health and safety requirements and practices
• access the computing system using a keyboard and password
• identify and access the specific file required using system documentation or help menu functions
• input against pre-set fields
• exit the system
• load and unload disk based information (where relevant).

**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1026A  Operate a computer to produce documents

Unit Descriptor
This unit covers the input, editing and printing of simple computer word processing documents and formatted reports.

Units Replaced
This unit replaces the following units:
- MNC.G26.A Operate a computer to produce documents.

Links outside this unit
The work described in this unit covers a significant amount of the work described in:
- BSBCM205A Use business technology
- ICAITU129A Operate a word processing application.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Create file.</td>
<td>1.1 Identify, analyse and confirm work requirements.</td>
</tr>
<tr>
<td></td>
<td>1.2 Turn on computer in accordance with manufacturer instructions.</td>
</tr>
<tr>
<td></td>
<td>1.3 Format new disk using correct procedure if necessary.</td>
</tr>
<tr>
<td></td>
<td>1.4 Load or select appropriate software from the menu.</td>
</tr>
<tr>
<td></td>
<td>1.5 Select or create appropriate directory.</td>
</tr>
<tr>
<td></td>
<td>1.6 Correctly open and name new file.</td>
</tr>
<tr>
<td></td>
<td>1.7 Observe OHS guidelines relating to screen based equipment and ergonomic workstations.</td>
</tr>
<tr>
<td>2  Produce document from written text using standard format.</td>
<td>2.1 Operate keyboard/mouse within the designated speed and accuracy requirements.</td>
</tr>
<tr>
<td></td>
<td>2.2 Produce document which is an accurate reflection of the written notes.</td>
</tr>
<tr>
<td></td>
<td>2.3 Produce document in required style and format.</td>
</tr>
<tr>
<td></td>
<td>2.4 Produce document within designated timelines.</td>
</tr>
<tr>
<td></td>
<td>2.5 Save document regularly to avoid loss of data.</td>
</tr>
<tr>
<td>3  Edit information.</td>
<td>3.1 Identify data to be edited.</td>
</tr>
<tr>
<td></td>
<td>3.2 Enter, change or delete data using keyboard / mouse.</td>
</tr>
<tr>
<td></td>
<td>3.3 Save document regularly to avoid loss of data.</td>
</tr>
<tr>
<td></td>
<td>3.4 Check edited information against original for accuracy</td>
</tr>
</tbody>
</table>
3.5 Check spelling and grammar.
3.6 Proof-read draft prior to final print out.
4 Print document.  
4.1 Use print preview to check document for format and layout.  
4.2 Print document as required.  
4.3 Load appropriate stationery into the printer.  
4.4 Alter defaults to suit document if necessary.  

5 Save, exit and shutdown.  
5.1 Save and close files and exit programs in accordance with specified procedures.  
5.2 File and store disks / data in accordance with site procedures.  
5.3 Make back up files in accordance with site procedures if required.  

RANGE STATEMENT  
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.  

Work requirements may be in the form of:  
- shift briefings  
- handover details, and/or  
- work orders  
- safe working procedures (or equivalent).  

Speed and accuracy may be to AS2708.  

Routine documents may include:  
- formatted proformas and reports  
- electronic mail  
- general correspondence.  

Documents may also include:  
- word processing  
- databases (edit / print only)  
- spreadsheets (edit / print only).  

Occupational health and safety guidelines may include:  
- posture  
- lighting  
- work stations set-up  
- glare  
- noise  
- temperature.
Printing may be required to a number of available printers within a network.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to operate a computer to produce documents
- implementation of appropriate procedures and techniques for the efficient and effective operation of a computer to produce documents, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on computer operations
  c. completing start-up and shut-down procedures
  d. completing operator maintenance
  e. completing essential functions including:
     e.1. creating a file
     e.2. producing a document
     e.3. editing information
     e.4. printing a document
     e.5. saving a document.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- occupational health and safety requirements for keyboard and screen based equipment
- the site computing environment
- information processing facilities generally available within the work area
- the printer support options available for use and systems for direction to printer
- file storage options and procedures
- site file management requirements and procedures
- types and uses of standard layout and templates.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- apply keyboard and screen based occupational health and safety requirements and practices
- access, read, interpret and apply relevant technical information
- perform simple word processing
- create new documents
- format documents
• apply formatting enhancements
• use available spell and grammar check facilities
• back up information
• save information to file
• exit the software
• print documents
• replenish consumables/paper in printer.

**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:
• observation of processes and procedures
• oral and/or written questioning on required knowledge and skills
• testimony from supervisors, colleagues, clients and/or other appropriate persons
• inspection of the final product or outcome
• a portfolio of documentary evidence
• simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.
Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1027A Use keyboard skills and advanced functions of software packages to produce complex documents

Unit Descriptor
This unit covers the establishment of document structures, and the production and saving of complex computerised documents. It requires the use of a range of functions within the software package.

Units Replaced
This unit replaces the following units:
• MNC.G27.A Use keyboard skills and advanced functions of software to produce complex documents.

Links outside this unit:
The work in this unit is equivalent to BSBCM306A Produce business documents. The work described in unit ICAITU131A Operate database application, partly covers the work described in this unit.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Establish document structure.</td>
</tr>
<tr>
<td>1.1</td>
<td>Select appropriate software.</td>
</tr>
<tr>
<td>1.2</td>
<td>Specify default format if necessary.</td>
</tr>
<tr>
<td>1.3</td>
<td>The structure and style of the document is suitable for the type of information provided.</td>
</tr>
<tr>
<td>1.4</td>
<td>Observe OHS guidelines relating to screen based equipment and ergonomic workstations</td>
</tr>
<tr>
<td>2</td>
<td>Produce documents.</td>
</tr>
<tr>
<td>2.1</td>
<td>Operate keyboard / mouse within the designated speed and accuracy requirements.</td>
</tr>
<tr>
<td>2.2</td>
<td>Enter and edit data accurately.</td>
</tr>
<tr>
<td>2.3</td>
<td>Use a range of advanced functions to ensure the accurate completion of the task within the designated timelines.</td>
</tr>
<tr>
<td>2.4</td>
<td>Insert information from other computer files and / or printed documents as required.</td>
</tr>
<tr>
<td>2.5</td>
<td>Check spelling and grammar.</td>
</tr>
<tr>
<td>2.6</td>
<td>Proof-read documents for accuracy of contents.</td>
</tr>
<tr>
<td>2.7</td>
<td>Proof-read documents for consistency of layout and style.</td>
</tr>
<tr>
<td>2.8</td>
<td>Make modifications to meet required specifications.</td>
</tr>
</tbody>
</table>
2.9 Present documents to the nominated person / section for approval prior to completion and / or final printing where necessary.

2.10 Use print preview function to check layout / format.

2.11 Print documents as required.

3 Save, exit and shutdown equipment.

3.1 Save, close files / documents and exit program in accordance with screen prompts to preserve the data.

3.2 File and store disks / data in accordance with site procedures.

3.3 Make back-up files in accordance with site procedures if necessary.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Speed and Accuracy may be to AS2708.

Complex computerised document production in this unit requires the application of a range of advanced functions and the insertion of information from other computer files within the same software package. (It does not require or involve the integration of information from other software packages)

Applications may include:
- statistical information in graph form
- projections
- flow charts
- charting diagrams
- payroll
- accounts payable.

Occupational health and safety issues may include:
- posture
- lighting
- work stations set-up
- glare
- noise
- temperature.

Complexity of software package functions utilised may include:
- tables
- columns
- cut and paste
EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to use keyboard skills and advanced functions of software packages to produce complex documents
- implementation of appropriate procedures and techniques for the efficient and effective use of keyboard skills and advanced functions of software packages to produce complex documents, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on computer operations
  c. completing start-up and shut-down procedures
  d. completing operator maintenance
  e. completing essential functions including:
     e.1. establishing the document structure
     e.2. using the software advanced functions
     e.3. producing the document.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- occupational health and safety standards and requirements relating to keyboard and screen based equipment
- site computing environment
- file management requirements and procedures
- software characteristics, capabilities and limitations
- computer systems security requirements
- types and uses of standard templates.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- apply screen based and ergonomic occupational health and safety requirements
- access, read, interpret and apply technical information related to computing
- interpret and clarify draft materials
- effectively proof materials / outcomes
• effectively communicate with the author / client
• operate within agreed timeframes.
Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1028A Use advanced functions of software packages to produce documents, reports and worksheets

Unit Descriptor
This unit covers the determination of presentation format and the production and saving of complex computerised documents. It requires the integration of materials between software packages.

Units Replaced
This unit replaces the following units:
- MNC.G28.A Use advanced functions of software packages to produce documents, reports and worksheets.

Links outside this unit:
The work described in unit ICAITU126A Use advanced features of computer applications partly covers the work described in this unit.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>Ensure that presentation and information requirements of the document are reflected in the layout and style.</td>
</tr>
<tr>
<td>1.2</td>
<td>Ensure that document design is consistent with guidelines.</td>
</tr>
<tr>
<td>1.3</td>
<td>Select appropriate software for the task.</td>
</tr>
<tr>
<td>1.4</td>
<td>Set up document ready for the entry of information.</td>
</tr>
<tr>
<td>1.5</td>
<td>Observe OHS guidelines relating to screen based equipment and ergonomic workstations.</td>
</tr>
<tr>
<td>2</td>
<td>Produce document.</td>
</tr>
<tr>
<td>2.1</td>
<td>Operate keyboard/mouse within the designated speed and accuracy requirements.</td>
</tr>
<tr>
<td>2.2</td>
<td>Clearly and accurately present all information.</td>
</tr>
<tr>
<td>2.3</td>
<td>Access a broad range of software package functions to ensure the accurate completion of the task within the designated timelines.</td>
</tr>
<tr>
<td>2.4</td>
<td>Use a broad range of advanced software package functions to display information clearly.</td>
</tr>
<tr>
<td>2.5</td>
<td>Insert information from other documents within the same software packages, or printed material as required.</td>
</tr>
<tr>
<td>2.6</td>
<td>Integrate information from other software packages as required.</td>
</tr>
</tbody>
</table>
2.7 Proof-read documents for accuracy and consistency.
2.8 Edit document as required.
2.9 Modify layout to improve appearance and meet required specifications.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Save, exit and shutdown equipment.</td>
</tr>
<tr>
<td>3.1</td>
<td>Save and close files/documents and exit program in accordance with screen prompts to preserve the data.</td>
</tr>
<tr>
<td>3.2</td>
<td>File and store disks/data in accordance with site procedures.</td>
</tr>
<tr>
<td>3.3</td>
<td>Make back-up files in accordance with site procedures if necessary.</td>
</tr>
</tbody>
</table>

**RANGE STATEMENT**

The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

**Complex computerised document** production may include:
- the application of a range of advanced functions
- the integration of information between software package
- procedures and policies, eg systems security, site formats and protocols, and back-up procedures
- complexity of software package functions utilised include:
  - importing and exporting of files and documents
  - integration of different applications.

**Occupational health and safety guidelines** may including:
- posture
- lighting
- work stations set-up
- glare
- noise
- temperature.

**Software packages** may include:
- word-processing
- databases
- spreadsheets
- graphics
- desktop publishing.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to use advanced functions of software packages to produce documents, reports and worksheets
- implementation of appropriate procedures and techniques for the efficient and effective use of advanced functions of software packages to produce documents, reports and worksheets, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on computer operations
  c. completing start-up and shut-down procedures
  d. completing operator maintenance,
  e. completing essential functions including:
     e.1. establishing the document structure
     e.2. integrating the functions of complex software
     e.3. producing the document.

**Required Knowledge**
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- occupational health and safety requirements related to the use of computers and ergonomic work stations
- site computing environment
- site computing systems and software and the capabilities and operations of these
- site document formats and protocols.

**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- apply screen based and ergonomic occupational health and safety requirements
- access, read, interpret and apply technical information related to computing
- interpret and clarify draft materials
- use and integrate the functions of complex software
- effectively proof materials / outcomes
- effectively communicate with the author / client
- operate within agreed timeframes.

**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.
Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1029A  Transfer information through a computer

Unit Descriptor
This unit covers the transfer of information by electronic mail, the Internet and Intranet.

Units Replaced
This unit replaces the following units:
• MNC.G29.A Transfer information through a computer.

Links outside this unit:
The work described in unit is equivalent to ICAITU113A Send and retrieve information over the Internet using browsers and email.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Plan and prepare for transfer.</td>
<td>1.1 Identify, analyse and confirm transfer requirement.</td>
</tr>
<tr>
<td></td>
<td>1.2 Observe occupational health and safety requirements for screen based equipment and ergonomic work stations.</td>
</tr>
<tr>
<td></td>
<td>1.3 Turn on computer and access the system in accordance with the site and manufacturer instructions.</td>
</tr>
<tr>
<td></td>
<td>1.4 Maintain computer system security throughout work in accordance with site requirements.</td>
</tr>
<tr>
<td>2 Send and receive electronic mail.</td>
<td>2.1 Enter email message into the software as required.</td>
</tr>
<tr>
<td></td>
<td>2.2 Select and attach documents to the email as required.</td>
</tr>
<tr>
<td></td>
<td>2.3 Transmit email messages and/or receive in accordance with manufacturer /site requirements.</td>
</tr>
<tr>
<td></td>
<td>2.4 Print, file, store or delete messages as required in accordance with site requirements.</td>
</tr>
<tr>
<td>3 Access and use the Internet/Intranet.</td>
<td>3.1 Identify and confirm information provider’s internet/intranet address.</td>
</tr>
<tr>
<td></td>
<td>3.2 Access information provider’s website in accordance with software procedures.</td>
</tr>
<tr>
<td></td>
<td>3.3 Identify, download and/or print information in accordance with software procedures.</td>
</tr>
<tr>
<td></td>
<td>3.4 Manage files as required.</td>
</tr>
<tr>
<td></td>
<td>Finalise transfer procedures.</td>
</tr>
</tbody>
</table>
RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Occupational Health and Safety may include:
- posture
- lighting
- seating
- workstation set-up
- glare
- noise
- temperature.

System access may require the use of log on identification and passwords.

Attachments may include:
- word-processing
- databases
- spreadsheets
- graphics.

Identification of Internet addresses may require Internet browsing.

File management may require:
- deletion
- downloading onto disk
- movement to other directories.

Computer security may include:
- protection of screen based or hardcopy sensitive information
- not leaving workstation unattended whilst logged on.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to transfer information through a computer
- implementation of appropriate procedures and techniques for the efficient and effective transfer of information through a computer, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on computer operations
  c. completing start-up and shut-down procedures.
d. completing essential functions including:
   d.1 transmitting and receiving email
   d.2 accessing and downloading information
   d.3 completing file management.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- occupational health and safety requirements related to the use of computers and ergonomic work stations
- site computing environment
- site computing systems and software and the capabilities and operations of these
- site file management procedures

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
- apply screen based and ergonomic occupational health and safety requirements
- access, read, interpret and apply technical information related to computing
- receive and transmit email messages
- use and integrate the functions of complex software.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.
The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**

Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1030A  Conduct purchasing

Unit Descriptor
This unit covers the direct purchasing of goods and materials by non-purchasing personnel.

Units Replaced
This unit replaces the following units:
• MNC.G30.A Conduct purchasing.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT  PERFORMANCE CRITERIA
1 Plan and prepare for purchasing.
   1.1 Identify purchasing requirements from work requests and confirm, if necessary, with the appropriate authority in accordance with site procedures.
   1.2 Determine quantities, specifications, price limitations and delivery requirements in accordance with site requirements.
   1.3 Complete the purchase order / list in accordance with site requirements.

2 Purchase materials.
   2.1 Advise the supplier/vendor of the requirements and specifications in accordance with site requirements.
   2.2 Adjust purchasing schedules where appropriate in accordance with site requirements.
   2.3 Check/inspect materials on receipt in accordance with site requirements.

3 Complete purchasing sequence.
   3.1 Account for purchased materials in accordance with site requirements.
   3.2 Maintain all records/reports in accordance with site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Specifications may be obtained from:
• drawings
• manufacturer specifications
• data sheets
• other site information.
**Purchased materials** may include, but are not limited to:

- components
- spare parts
- raw materials.
EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to conduct purchasing
- implementation of appropriate procedures and techniques for the efficient and effective conduct of purchasing, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. interpreting and communicating information on purchasing operations
  b. identifying purchase requirements
  c. completing purchasing documentation
  d. accounting for purchased materials.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- site purchasing procedures
- materials requirements
- available vendors / suppliers.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- communicate effectively
- determine purchasing requirements
- maintain records.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1031B Remove and fit wheel assemblies

Unit Descriptor
This unit identifies the competence required to apply technical skills for the removal and fitting of wheel assemblies applicable to rubber tyred equipment.

Units Replaced
This unit replaces the following unit:
- MNC.G39.A Fit and maintain tyres and wheels.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT PERFORMANCE CRITERIA

1. Plan for work.
   1.1 Obtain, interpret and clarify work requirement and safety information and procedures, in accordance with legislation and site procedures, before proceeding.
   1.2 Identify site risks and hazards, including equipment to be used.
   1.3 Set up maintenance schedules based on tyre usage, wear or condition in accordance with legislation, manufacturer and/or site procedures.
   1.4 Access and apply safety information and procedures throughout the operations.

2. Prepare for work.
   2.1 Identify wheel/rim type, and mounting system.
   2.2 Prepare, clean and inspect wheel assemblies in accordance with legislation, manufacturer and/or site procedures.
   2.3 Select and check tools are fit for purpose in accordance with manufacturer and/or site procedures.

3. Assess risk in wheel assembly removal.
   3.1 Identify and control any hazardous conditions of the work environment before proceeding
   3.2 Identify and control any hazardous conditions of the assembly before proceeding
   3.3 Identify wheel by construction and mounting type.
3.4 Access and interpret correct information from appropriate manufacturer specifications and site procedures.

3.5 Identify when tyre(s) require deflation before removal from equipment.

4. Remove wheel assembly.
   4.1 Plan sequence of work, noting points where safety checks are required.
   4.2 Identify and apply methods for raising and supporting equipment in accordance with site procedures.
   4.3 Identify and apply methods for removing the wheel in accordance with site procedures.
   4.4 Identify and apply site procedure for transport and storage of wheel.

5. Inspect wheel assemblies and fasteners.
   5.1 Access and apply site procedure for inspection of wheel assemblies and fasteners.
   5.2 Clean and visually inspect wheel assembly for damage, wear, corrosion foreign material, cracks, and compatibility of components.
   5.3 Clean and visually inspect mounting surfaces and fasteners for damage, wear, corrosion, foreign material and cracks.
   5.4 Check specifications and compare to conditions found.
   5.5 Report and action findings in accordance with site procedures.
   5.6 Discard unusable fasteners in accordance with manufacturers or site procedures.

6. Fit wheel assembly.
   6.1 Access and interpret information from appropriate manufacturer specifications and site procedures.
   6.2 Identify and apply methods in accordance with site procedures for fitting the wheel.
   6.3 Ensure that tightening sequence, torque settings and inflation pressure are in accordance with manufacturer’s specifications and site procedures.
   6.4 Check wheel assembly for correct fitment including alignment.
6.5 Identify and apply methods for lowering equipment in accordance with site procedures.

6.6 Retorque as required in accordance with site procedures and manufacturer’s specifications.

6.7 Record data and all work performed in accordance with site procedures.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Legislation/regulation controls may include:
- occupational health and safety
- duty of care
- environmental
- mines department/extractive industries
- award provisions.

Information may include:
- Tagging out and immobilisation of equipment
- jacking points
- for specifications for torque settings and tightening sequences
- inflation pressure

Wheels and Rim may include:
- rim or hub mounted split rim
- safety lock rim
- split rim, forklift or cranes.
- rim or hub mounted multi piece rim
- One piece wheel/rim

Wheel assemblies
- tyre and rim
- tyre and wheel mounted to a wheel

Tools may include:
- lifting equipment
- hand tools, power tools.
- jacks and support stands
- Personal protective equipment (PPE)

Hazardous conditions of the assembly may include:
- Tyre defects
  - Distortion
- Structural damage
- Cuts and damage
- Potential internal fire/explosion
- Potential external fire/tyre burst
- Under inflated tyre
- Wheel and rim component defects
  - cracks
  - distortion
  - wear
  - corrosion
  - dislodged components
  - leakage
  - mechanical damage
  - valve gear
  - blocked valve
  - expired scheduled testing date

**Hazardous conditions of the working environment** may include:
- changing ground conditions
- dust
- noise
- weather
- traffic interaction
- personnel interaction

**Fasteners** may include:
- wedges
- nuts
- bolts
- washers
- studs
- cleats
- wedge bands
- spacer bands
- reducers

**Methods** should apply to the following conditions and may include:
- indoors or outdoors
- level or uneven ground conditions
- hard or soft ground conditions
- workshop or mining area
- surface or underground
- Wet or dry
- Night or day
- Standard or non standard heavy rims.

**Data** may include:
- site maintenance records
- retorque tags

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**

The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to remove and fit wheel assemblies on a site
- implementation of appropriate procedures and techniques for the efficient and effective removal and fitting of wheel assemblies on a site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. raising and supporting vehicle safely
  b. removing and fitting wheel assemblies without damage or injury to tools, equipment or personnel in accordance with the methods of assessment.
  c. identifying critical personal safety aspects
  d. The following must be demonstrated on the job:
     - raising and supporting equipment
     - deflating and inflating tyres or tubes
     - removing and fitting wheel or rim
     - handling tyre and wheel assembly using the relevant equipment.
     - tightening, torque and retorque the assembly fasteners
     - an ability to employ Risk Assessment procedures

**Required Knowledge**

Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- identifying hazards
- safety precautions to be observed throughout the removal and fitting process
- rubber tyred equipment safety requirements
- types and classifications of wheels and rims
- soft ground support
- personal safety requirements
- process used in undoing wheel or rim fasteners
- process used in torque measurement when tightening wheel or rim fasteners
- process used to inflate and deflate tyres
- distinguish the difference between a rim and a wheel
- jacking and support procedures
- manual handling techniques.
- Identifying components for compatibility

**Required Skills**

Specific skills are required to achieve the Performance Criteria of this unit, particularly for their application in the variety of circumstances in which this unit may be applied.
• observe safety precautions
• access, interpret and apply technical information
• lift and support vehicle/machine
• use load handling equipment
• remove and refit wheel and rim
• follow site procedures
• operate hand tools.

**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a site work environment. Selection and use of resources for particular sites may differ due to site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions, where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. e.g., language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:
• observation of processes and procedures
• oral and/or written questioning on required knowledge and skills
• testimony from supervisors, colleagues, clients and/or other appropriate persons
• inspection of the final product or outcome
• a portfolio of documentary evidence
• simulation and/or scenario analysis

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.
Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
### MNCG1032B Remove, repair and refit tyres and tubes

**Unit Descriptor**
This unit identifies the competence required to apply technical skills for the removal, repair and refitment of tyres and tubes.

**Units Replaced**
This unit replaces the following units:
- MNC.G39.A Fit and maintain tyres and wheels.

**Employability Skills**
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

### ELEMENT PERFORMANCE CRITERIA

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
</table>
| 1. Plan for work. | 1.1. Obtain, interpret and clarify *work requirement and safety information and procedures*, in accordance with legislation and site procedures, before proceeding.  
1.2. Identify site and task hazards, and risks, including risk controls and equipment to be used.  
1.3. Set up maintenance schedules based on tyre usage, wear or condition in accordance with legislation, manufacturer and/or site procedures.  
1.4. Schedule work based on *information* provided |
| 2. Prepare for work. | 2.1 Identify *wheel assembly*, and type of mounting system.  
2.2 Prepare, clean and inspect *wheel assembly* for damage, wear, corrosion foreign material, cracks, and compatibility of components in accordance with *legislation*, manufacturer and/or site procedures.  
2.3 Select and check *tools and equipment* are fit for purpose in accordance with manufacturer and/or site procedures. |
| 3. Control of risk | 3.1 Access and interpret correct information from appropriate manufacturer specifications and site documentation.  
3.2 Control or report any *hazardous conditions of the work environment* before proceeding. Note points where safety checks are required. |
3.3 Control or report any *hazardous conditions of the assembly* before proceeding. Note points where safety checks are required.

3.4 Control or report any *task hazards* before proceeding, for example use of a deflation cage or lifting device to prevent manual handling injury. Note points where safety checks are required.

3.5 Ensure that tyre and or tube is fully deflated before proceeding with the task.

This may include the identification and safe removal and purging of *toxic fill substances* according to OH&S requirements and OEM specifications.

4. Remove tyre and or tube from wheel/rim assembly

4.1 Identify methods for the removal of tyres and tubes in accordance with site procedures and OEM specifications.

Access and interpret correct *information* from appropriate manufacturer specifications.

4.2 Carry out removal in accordance with site procedures and OEM specifications.

4.3 Clean and inspect *wheel/rim assembly* components and assign status of disposition.

4.4 Complete appropriate workplace documentation relevant to removal outcomes.

5. Inspection of wheel/rim assembly components prior to assembly

5.1 Ensure selected *wheel/rim assembly* components are compatible and suitable for application per OEM requirements.

5.2 Inspect the tyre for serviceability.

5.3 Inspect the *wheel/rim* and associated parts for serviceability.

5.4 Inspect the *fastening systems* for serviceability.

5.5 Where applicable, inspect the vehicle hub for serviceability.
6. Fit tyre and or tube to wheel/rim assembly

6.1 Identify methods for the fitment of tyres and tubes in accordance with site procedures and OEM specifications.

Access and interpret correct information from appropriate manufacturer specifications.

6.2 Where applicable, add tyre additive in accordance with site procedures and OEM specifications or recommendation.

6.3 Carry out refitting/replacement according to site procedures and OEM specifications.

6.4 Conduct integrity check of wheel assembly.

6.5 Complete appropriate workplace documentation relevant to fitment and integrity check outcomes.

7. Inflation and or addition of ballast

7.1 Inflate assembly for storage or use in accordance with site procedures and OEM specifications or recommendation.

7.2 Where required add ballast in accordance with site procedures and OEM specifications.

7.3 Complete and deal with appropriate workplace documentation relevant to inflation pressure, gas used and or ballast added

8. Inspect, tyres, tubes and wheels/rims.

8.1 Inspect tyres, tubes and wheels/rims for serviceability, and or repairability.

8.2 Access and interpret correct information from appropriate manufacturer specifications.

8.3 Carry out inspections and tests according to site and OEM requirements.

8.4 Inspect tyres and tubes to identify those requiring minor repair.

8.5 Complete appropriate workplace documentation relevant to inspection outcomes

9. Carry out a minor tube and tyre repair.

9.1 Identify task hazards and risks, and apply risk controls and equipment to be used.

9.2 Access and interpret correct information from appropriate manufacturer specifications.

9.3 Carry out minor repair of tubes and tyres according to site procedures.
9.4 Complete appropriate workplace documentation relevant to repair outcomes.

RANGE STATEMENT

The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Work requirement and safety information and procedures may include

- Safe work procedures
- Site procedures
- OEM specifications and recommendations
- Data recording
- MSDS - material safety data sheets
- Legislation, Standards and Codes of Practice

Information may include:

- enterprise operating procedures
- industry/workplace codes of practice
- product manufacturer specifications
- customer requirements
- MSDS - material safety data sheets
- statutory requirements.
  - Tagging information
  - specifications for torque settings and tightening sequences
  - inflation pressure
  - tyre additive and ballast volumes

Wheels/rims may include:

- safety lock rim
- split ‘industrial’ rim, (forklift or cranes).
- rim or hub mounted multi piece rim
- One piece wheel/rim

Wheel assemblies

- tyre and rim
- tyre and wheel mounted to a wheel

Legislation/regulation controls may include:

- occupational health and safety
- duty of care
- environmental
- mines department/extractive industries
- award provisions.
**OH&S practices** may include:
- State/industry OH&S legislation
- Award provisions.

**Tools and equipment** may include:
- hand tools, power tools,
- wheel assemble lifting equipment,
- specialised equipment such as:
  - buffs
  - spreaders
  - tyre removal equipment
  - immersion tanks.
- lifting equipment
- Personal protective equipment (PPE)

**Hazardous conditions of the working environment** may include:
- changing ground conditions
- dust
- noise
- weather
- traffic interaction
- personnel interaction

**Hazardous conditions of the assembly** may include:
- Tyre defects
  - Distortion
  - Structural damage
  - Cuts and damage
  - Potential internal fire/explosion
  - Potential external fire/tyre burst
  - Under inflated tyre
- Wheel and rim component defects
  - cracks
  - distortion
  - wear
  - corrosion
  - dislodged components
  - leakage
  - mechanical damage
  - valve gear
  - blocked valve
  - expired scheduled testing date

**Task hazards** may include
- less than adequate housekeeping
- selection of incorrect tooling
- manual handling
- use of tooling
- working in and around other machinery
• compressed air
• chemicals
• oversight
• fatigue
• plant defects

**Toxic fill substances** may include

• Nitrogen gas
• Poly urethane resin (PUR) tyre fill
• Tyre additive

**Methods** may include:

• visual inspection
• use of specific hand tools and equipment
• types of tubes and tyres
• various repair methods/material
• ballast requirements
• tyre fill substances

**Methods** should apply to the following conditions and may include:

• indoors or outdoors
• level or uneven ground conditions
• hard or soft ground conditions
• workshop or mining area
• surface or underground
• Wet or dry
• Night or day
• Standard or non standard heavy rims.

**Fasteners** may include:

• wedges
• nuts
• bolts
• washers
• studs
• cleats
• wedge bands
• spacer bands
• reducers

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**

The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

• knowledge of procedures, requirements and instructions to remove, fit and repair tyres and tubes on a site
• implementation of appropriate procedures and techniques for the efficient and effective removal, fitting and repair of tyres and tubes on a site, while complying with site risk
control, health, safety, environmental, quality and communication requirements. This will include:

a. interpreting and communicating procedural information
b. repair procedures for tubes and tyres
c. safe working practices/procedures.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- types of tubes and tyres and their construction
- inspection procedures to determine repairability
- company position in relation to tyre repair
- roadworthy requirements relating to tyres and rims
- tyre and tube removal and refitting/replacement procedures, including rim types
- tyre and tube repair procedures
- ballast identification, types and application
- ballast adding and removal procedures
- tyre fill identification, types and application
- tyre fill adding/removal methods and procedures
- safety precautions related to handling of tyre fill substances
- equipment safety requirements
- relevant manufacturer/company policies
- legislation where applicable
- manual handling procedures
- personal safety requirements.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- access, interpret and apply technical information
- use relevant tools and equipment safely
- apply manual handling procedures
- apply personal safety requirements
- repair tyre and/or tube
- remove and replace tyre and/or tube
- assess tube and tyre repairability
- add and remove ballast
- add and remove fill substances.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.
Resource Implications
Assessment of this competency requires typical resources normally used in a site work environment. Selection and use of resources for particular sites may differ due to site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1033A  Conduct lifting operations

Unit Descriptor
This unit covers the, lifting, slinging and/or directing the crane/hoist for the movement of loads with known weights, defined slinging points, and using basic slinging techniques within ten metres of the operator.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
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<tbody>
<tr>
<td>1  Plan for lifting.</td>
<td></td>
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<tr>
<td>1.1   Obtain, interpret and clarify/confirm work requirements in the form of <em>shift briefings</em>, handover details or work orders before proceeding.</td>
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<td>1.2   Develop a <em>preliminary lifting plan</em> taking account of essential information.</td>
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<td>1.3   Check and confirm job feasibility and schedule with the load designer and other relevant persons.</td>
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<tr>
<td>1.4   Confirm hazards associated with the use of cranes and other load moving equipment and identify and check measures to eliminate or control these hazards with appropriate parties.</td>
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<tr>
<td>1.5   Finalise and confirm lifting plan, including the scheduling of required resources, as meeting the applicable Australian Standards, codes of practice and equipment manufacturer specifications.</td>
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<tr>
<td>2  Prepare for lifting.</td>
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<tr>
<td>2.1   Identify, select, inspect, assemble and certify <em>lifting equipment, materials and tools</em> required for the plan as serviceable in accordance with Australian Standards and codes of practice.</td>
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<tr>
<td>2.2   Label unserviceable equipment, materials and tools in accordance with Mine Managers Rules and Schemes.</td>
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<tr>
<td>3  Move loads</td>
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<tr>
<td>3.1   Deduce and confirm appropriate safe working loads and centre of gravity using load charts and sling tags/charts prior to load moving.</td>
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<tr>
<td>3.2   Direct the movement of the load using standard <em>signals for load moving</em>.</td>
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</tr>
<tr>
<td>3.3   Perform load moving in accordance with the plan, acceptable <em>safe work practices</em> and appropriate Australian Standards, codes of practice and</td>
<td></td>
</tr>
</tbody>
</table>
manufacturer specifications.

3.4 Perform work safely.

3.5 Connect lifting gear to load to Australian Standards and manufacturer specifications.

3.6 Connect load to movement device using appropriate and certified equipment in accordance with Australian Standards and manufacturer specifications.

3.7 Ensure stability of the load by application of load movement procedure, temporary bracing and/or load support appropriate to the task and related manufacturer specifications.

3.8 Follow appropriate specifications during the placement and securing of the load.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Shift briefings may include:
- site plans and drawings
- work specifications
- basic working plans and material schedules
- the confirmed mass and dimensions of loads
- capacities and availability of load shifting equipment.

Preliminary lifting plan may include:
- confirmed details of lifting and slinging requirement
- confirmed dimensions
- site access and egress
- suitability and availability of materials
- tools and equipment
- identification of potential hazards
- probable control measures
- identification of site coordination requirements.

Slinging equipment, materials and tools may include:
- slings
- ropes
- shackles and eye-bolts
- motive power including:
  - overhead
  - vehicle loading cranes
  - non-slewing cranes.
Signals for load moving are to include those that are communicated verbally and with hand signals, to Australian Standards.

Safe work practices may be contained in:
- legislation and regulations
- relevant Australian standards
- management plans
- manager’s rules
- OH&S policy
- codes of practice
- manufacturer instructions
- safe working or job procedures.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to conduct slinging operations on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective conduct of lifting operations on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a applying personal and operational safety procedures
  b interpreting and communicating information on lifting operations
  c completing essential functions including:
    c1 preparing the site
    c2 assessing and selecting appropriate certified equipment
    c3 inspecting lifting gear
    c4 connecting loads to lifting gear
    c5 moving loads
    c6 directing crane/hoist operation
    c7 maintaining equipment
    c8 restoring the site.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- appropriate Approved Scheme of Training
- site and equipment safety requirements
- equipment characteristics, technical capabilities and limitations
- operational and maintenance procedures
- hand signals
- potential hazards.
Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
- apply operational safety requirements
- access, interpret and apply technical information
- maintain equipment records
- apply diagnostic techniques
- use relevant hand tools
- identify hazards.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit must be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.
Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1035A Apply operational maintenance skills

Unit Descriptor
This unit covers the maintenance skills which are appropriate for application by operators, servicemen and trades support personnel.

Units Replaced
This unit replaces the following units:
- MNC.G35.A Apply operational maintenance skills.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Select, use and care for tools.</td>
</tr>
<tr>
<td></td>
<td>1.1 Correctly identify and obtain tools required for the work.</td>
</tr>
<tr>
<td></td>
<td>1.2 Inspect tools for serviceability and prepare for use.</td>
</tr>
<tr>
<td></td>
<td>1.3 Correctly and safely use tools for their intended purpose.</td>
</tr>
<tr>
<td></td>
<td>1.4 Identify and respond to tool maintenance requirements in accordance with manufacturer instructions and work procedures.</td>
</tr>
<tr>
<td></td>
<td>1.5 Clean tools after use and return / store in accordance with site procedures and practices.</td>
</tr>
<tr>
<td>2</td>
<td>Identify and respond to basic faults in mechanical systems.</td>
</tr>
<tr>
<td></td>
<td>2.1 Apply site safety systems and procedures, including isolation procedures, when working with mechanical systems.</td>
</tr>
<tr>
<td></td>
<td>2.2 Identify general components of mechanical systems, and their functions.</td>
</tr>
<tr>
<td></td>
<td>2.3 Apply basic diagnostic techniques to identify and respond to faults.</td>
</tr>
<tr>
<td></td>
<td>2.4 Rectify faults or refer to others in accordance with site procedures.</td>
</tr>
<tr>
<td>3</td>
<td>Identify and respond to basic faults in electrical systems.</td>
</tr>
<tr>
<td></td>
<td>3.1 Apply site safety systems and procedures, including isolation procedures when working with electrical systems.</td>
</tr>
</tbody>
</table>
3.2 Identify components and functions of basic electrical circuitry.

3.3 Apply basic diagnostic techniques to identify and respond to faults.

3.4 Rectify faults or refer to others in accordance with site procedures.

4 Identify, select and use fasteners

4.1 Apply site safety systems and procedures, including isolation procedures when working with fasteners.

4.2 Correctly identify and match with the work requirements.

4.3 Use/apply fasteners in accordance with manufacturer instructions and site procedures/practices.

4.4 Dispose of discarded materials in accordance with site procedures.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Operational maintenance procedures are those established and authorised at the mine.

Site safety systems and procedures may be contained in legislation and regulations.

Tools may include:
- hand
- power tools
- measuring devices.

Mechanical systems may be:
- hydraulic
- lubrication
- pneumatic.

Electrical circuitry may cover low and medium voltage and include equipment batteries.

Fasteners may include:
- screws
- bolts
- staples
• clamps
• rivets
• adhesives.
EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

• knowledge of procedures, requirements and instructions to apply operational maintenance skills on a mine site
• implementation of appropriate procedures and techniques for the efficient and effective application of maintenance skills on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety measures
  b. interpreting and communicating information on operational maintenance functions
  c. identifying, selecting, preparing, using and maintaining: hand tools and power tools
  d. identifying, selecting, preparing, using and maintaining power tools
  e. identifying and responding to basic faults in:
     e1 mechanical systems
     e2 hydraulic systems
     e3 pneumatic systems
     e4 lubrication systems
     e5 electrical systems
  f. identifying, selecting and using a range of fasteners.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

• types and uses of oils, greases, hydraulic fluids, brake fluid and other commonly used servicing materials
• site isolation procedures
• site operational and safety procedures
• site procedures relating to operational maintenance
• site maintenance systems and procedures
• types, characteristics, uses and limitations of hand tools and power tools
• types, characteristics, uses and limitations of measuring devices
• hand tool maintenance, care and storage procedures
• power tool maintenance, care and storage procedures
• the functions of major components of common:
  - mechanical systems
  - hydraulic systems
  - pneumatic systems
  - lubrication systems
• basic diagnostic processes / techniques of mechanical systems
• major components within common electrical systems
• electrical system basic circuit diagnostic processes and techniques
• types, uses, grades and limitations of fasteners
• environmental constraints and requirements related to operational maintenance.
Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- apply operational safety requirements
- access and interpret manufacturer and site technical information
- match tools with work needs
- apply site isolation procedures
- respond to faults
- apply diagnostic techniques to systems
- complete reporting systems
- comply with environmental requirements.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.
Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNC1036A Provide support to electrical tradesperson

Unit Descriptor
This unit covers the support provided to an electrical tradesperson during normal duties and emergency situations.

Units Replaced
This unit replaces the following units:
- MNC.G36.A Provide electrical support (to tradesperson).

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT PERFORMANCE CRITERIA

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Plan and prepare for support.</td>
<td>1.1 Receive and clarify details of support required from tradesperson.</td>
</tr>
<tr>
<td></td>
<td>1.2 Access and apply safety information and procedures throughout the work.</td>
</tr>
<tr>
<td></td>
<td>1.3 Analyse work requirement and complete immediate planning / organising.</td>
</tr>
<tr>
<td></td>
<td>1.4 Identify and select commonly used parts / stores according to work requirements.</td>
</tr>
<tr>
<td></td>
<td>1.5 Pack, load and transport parts/stores and equipment to worksite in accordance with work plan.</td>
</tr>
<tr>
<td>1 Support tradesperson.</td>
<td>2.1 Resolve coordination activities with others at the site prior to commencement of, and during, the work activity.</td>
</tr>
<tr>
<td></td>
<td>2.2 Carry out support tasks in accordance with the tradesperson’s directions.</td>
</tr>
<tr>
<td>2 Apply emergency procedures.</td>
<td>3.1 Apply emergency isolation and shut-down procedures in accordance with site procedures.</td>
</tr>
<tr>
<td></td>
<td>3.2 Notify emergency in accordance with site procedures.</td>
</tr>
<tr>
<td></td>
<td>3.3 Apply emergency first-aid appropriate to the situation in accordance with site procedures.</td>
</tr>
<tr>
<td></td>
<td>3.4 Provide information/reports required by site</td>
</tr>
</tbody>
</table>
emergency procedures to appropriate authorities.
RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Work requirements may be in the form of:
- shift briefings
- handover details, and/or
- work orders
- safe working procedures (or equivalent).

Details of support required may include:
- nature and scope of work
- locations, timings
- equipment/plant to be used (including any defects)
- system being worked on
- specific safety requirements
- hazards and potential hazards
- coordination requirements/issues.

Safety information and procedures may be contained in:
- legislation and regulations
- relevant Australian standards
- management plans
- OH&S policy
- codes of practice
- manufacturer instructions
- safe working or job procedures (or equivalent).

Support tasks may include:
- tagging emergency HV switching
- operation/re-setting circuit-breakers
- greasing motors and jointing cables.

Equipment may include:
- ladders
- safety equipment
- hazardous chemicals
- oxyacetylene
- air compressors
- others as designated at sites.
EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to provide support to electrical tradesperson on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective provision of support to electrical tradespersons on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements.

This will include:
- applying personal and operational safety procedures
- interpreting and communicating operational information
- preparation and layout of worksite
- complying with isolation / work permit procedures
- applying emergency procedures
- applying initial response first aid and rescue procedures
- complying with environmental awareness.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- site and equipment safety procedures
- site operational and maintenance procedures
- basic electrical componentry
- switching (for emergency purposes)
- earthing
- hazard identification and response procedures.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- apply operational safety requirements
- access, interpret and apply technical information
- work at heights
- identify electrical system components
- identify electrical spares
- apply operational maintenance diagnostic techniques
- use relevant hand tools
- maintain equipment records.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

**Resource Implications**

Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**

To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**

This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**

Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1037A Service mine plant and equipment

Unit Descriptor
This unit covers the scheduled servicing of mine plant and equipment additional to that covered by operator maintenance.

Units Replaced
This unit replaces the following units:
- MNC.G37.A Service mine plant and equipment.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Plan and prepare for servicing.</td>
<td>1.1 Receive, interpret and clarify <em>shift servicing requirements</em>.</td>
</tr>
<tr>
<td></td>
<td>1.2 Access and apply <em>safety information and procedures</em> throughout the work.</td>
</tr>
<tr>
<td></td>
<td>1.3 Conduct pre-start checks on the service vehicle in accordance with manufacturer and/or site procedures.</td>
</tr>
<tr>
<td></td>
<td>1.4 Check and top up service vehicle levels of fuel, lubricants and water as required in the service plan.</td>
</tr>
<tr>
<td></td>
<td>1.5 Maintain the <em>service bay/equipment</em>.</td>
</tr>
<tr>
<td></td>
<td>1.6 Identify replacement parts and service tools from the servicing schedule and obtain them from the appropriate stores area.</td>
</tr>
<tr>
<td>2 Service plant and equipment.</td>
<td>2.1 Coordinate and liaise to arrange details of preparatory activities, timing and location of servicing.</td>
</tr>
<tr>
<td></td>
<td>2.2 Carry out start-up, park-up and shut-down procedures on service vehicle in accordance with manufacturer and/or site specific requirements.</td>
</tr>
<tr>
<td></td>
<td>2.3 Operate service vehicle in accordance with manufacturer and/or site requirements.</td>
</tr>
<tr>
<td></td>
<td>2.4 Carry out servicing of plant and equipment in accordance with the service schedule, manufacturer specifications and site requirements.</td>
</tr>
</tbody>
</table>
2.5 Dispose of used oils and lubricants in accordance with environmental regulations and site requirements.

2.6 Maintain completed servicing schedule and/or records in accordance with site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Shift servicing requirements may include:
- number and type of plant and equipment to be serviced
- description of servicing required
- specific servicing priorities and achievement targets
- location of plant and equipment
- site lighting arrangements
- hazards and potential hazards
- coordination details.

Safety information and procedures may be contained in:
- legislation and regulations
- relevant Australian Standards
- management plans
- OH&S policies
- codes of practice
- manufacturer instructions
- safe working or job procedures (or equivalent).

Service vehicle may be any vehicle that is designed or modified to carry and operate service equipment.

Service bay/equipment requirements may include:
- clearing and cleaning access ways
- monitoring and maintaining fuel and lubricant levels
- checking and maintaining service bay/equipment
- applying authorised sampling procedures.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to service mine plant and equipment on a mine site;
• implementation of appropriate procedures and techniques for the efficient and effective … servicing of mine plant and equipment on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on servicing operations
  c. completing servicing equipment pre-start, start-up and shut-down procedures
  d. completing housekeeping requirements
  e. following and applying authorised serving procedures
  f. disposing of environmentally sensitive oils, fluids and materials
  g. materials handling and storage procedures.

**Required Knowledge**
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
  • site and equipment safety requirements
  • isolation and tag-out procedures
  • emergency fire procedures
  • equipment characteristics, technical capabilities and limitations
  • fuel and lubricant applications and specifications
  • filter applications and specifications
  • additives applications and specifications
  • hazardous chemical (Hazchem) systems
  • hazard identification and response procedures
  • site environmental requirements and constraints related to servicing.

**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
  • apply operational safety requirements
  • read, interpret and apply technical information
  • apply diagnostic techniques
  • use relevant hand tools
  • carry out oil sampling operations
  • apply environmental constraints in service operations
  • maintain equipment records
  • dispose of environmentally sensitive fluids and materials.

**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1038A  Perform basic cutting and welding

Unit Descriptor
This unit covers the cutting and non load-bearing welding of materials using manual metal arc welding, oxyacetylene and cutting equipment and systems.

Units Replaced
This unit replaces the following units:
- MNC.G38.A Perform basic cutting and welding.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Plan and prepare for welding.</td>
<td>1.1 Identify and confirm weld and cutting requirements from work orders, specifications, drawings and / or verbal instruction.</td>
</tr>
<tr>
<td></td>
<td>1.2 Identify, select and assemble welding and cutting equipment, consumables and appropriate tools in accordance with job requirements / welding specifications and site procedures.</td>
</tr>
<tr>
<td></td>
<td>1.3 Access and apply safety information and procedures throughout the work.</td>
</tr>
<tr>
<td></td>
<td>1.4 Prepare and align material to job specification.</td>
</tr>
<tr>
<td>2  Cut and weld materials.</td>
<td>2.1 Undertake and verify test runs in accordance with manufacturer instructions and site specifications.</td>
</tr>
<tr>
<td></td>
<td>2.2 Carry out welding and cutting in accordance with site procedures.</td>
</tr>
<tr>
<td></td>
<td>2.3 Clean welds using appropriate tools and techniques.</td>
</tr>
<tr>
<td></td>
<td>2.4 Confirm weld and cut specifications by visual inspection and defects identified and repaired.</td>
</tr>
<tr>
<td>3  Complete the work.</td>
<td>3.1 Carry out equipment inspections and fault finding in accordance the manufacturer instructions and site requirements.</td>
</tr>
<tr>
<td></td>
<td>3.2 Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer</td>
</tr>
</tbody>
</table>
instructions and site procedures.

3.3 Carry out minor maintenance to manufacturer instructions and site requirements.

3.4 Process records in accordance with site requirements.

**RANGE STATEMENT**

The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

**Cutting** covered by this unit may include the application of:
- profile cutters
- grinders and plasma cutters
- oxyacetylene.

**Welding** covered by this unit is non-load bearing tack, fillet or butt welding using manual metal arc welding (MMAW) or oxyacetylene.

**Non load-bearing** – as per Australian Standards

**Materials** may include:
- carbon steel
- galvanised pipe.

**Drawings** may include:
- plans
- sketch
- schematic.

**Safety information and procedures** may be contained in:
- legislation and regulations
- relevant Australian standards
- management plans
- OH&S policy
- codes of practices
- manufacturer instructions
- safe working procedures (or equivalent).

**Servicing** may include:
- cleaning and replacing tips
- lubrication
- replacing filter.

**EVIDENCE GUIDE**
Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to perform basic cutting and welding on a mine site;
- implementation of appropriate procedures and techniques for efficient and effective basic cutting and welding on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. interpreting and communicating information on cutting and welding operations
  b. selecting and preparing cutting and welding equipment
  c. preparing the work site
  d. welding (both butt and fillet)
  e. cutting using oxyacetylene and one other method
  f. restoration of the work site
  g. completing operator maintenance.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- site and equipment safety procedures
- basic / introductory metallurgy
- welding processes, techniques and procedures
- welding equipment characteristics, uses and limitations
- cutting processes, techniques and procedures
- cutting equipment characteristics, uses and limitations
- hazard identification and response procedures
- site environmental constraints related to welding and cutting.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- apply operational safety requirements
- access, interpret and apply technical information
- apply hand-eye coordination
- read sketches or basic drawings
- identify and select from a range of welding equipment and accessories
- identify and match cutting equipment with specified tasks
- comply with environmental requirements.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.
Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
**MNCG1040A  Operate gantry crane**

**Unit Descriptor**
This unit covers the lifting and positioning of loads using a gantry crane.

**Units Replaced**
This unit replaces the following units:
- MNC.G40.A Operate gantry crane.

**Links outside this unit**
The work covered in this unit relates to the NOHSC No: 1006 (2001) unit of competency for cranes.

**Employability Skills**
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Plan and prepare for operations.</td>
</tr>
<tr>
<td></td>
<td>1.1 Obtain, interpret and clarify / confirm work requirements in the form of <em>shift briefings, handover details or work orders</em> before proceeding.</td>
</tr>
<tr>
<td></td>
<td>1.2 Access and apply <em>safety information and procedures</em> throughout the work.</td>
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<tr>
<td></td>
<td>1.3 <em>Work preparation</em> is in accordance with AS2550, legislation and manufacturer/site requirements.</td>
</tr>
<tr>
<td></td>
<td>1.4 Coordinate activities with others at the site prior to commencement of, and during, the work activity.</td>
</tr>
<tr>
<td>2</td>
<td>Operate gantry crane.</td>
</tr>
<tr>
<td></td>
<td>2.1 Prepare load for lift in accordance with crane limitations and rigging requirements.</td>
</tr>
<tr>
<td></td>
<td>2.2 Carry out pre-start, start-up, park-up and shutdown procedures in accordance with <em>Australian Standards</em>, manufacturer and/or site requirements.</td>
</tr>
<tr>
<td></td>
<td>2.3 Confirm the work area is clear and safe prior to commencing the lift.</td>
</tr>
<tr>
<td></td>
<td>2.4 Interpret <em>signals</em> in accordance with site procedures.</td>
</tr>
<tr>
<td></td>
<td>2.5 Operate controls to lift, transfer and lower loads in accordance with manufacturer instructions and site procedures.</td>
</tr>
</tbody>
</table>
2.6 Monitor lift operations to ensure compliance with equipment limitations.

3 Carry out operator maintenance.

3.1 Carry out gantry crane inspections and fault finding in accordance with manufacturer instructions and site requirements.

3.2 Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer instructions and site procedures.

3.3 Carry out minor maintenance to manufacturer instructions and site requirements.

3.4 Process records in accordance with site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Shift briefings/handover details/work orders may include:
- crane equipment to be used
- nature and scope of tasks
- details of load chart/factors
- achievement targets
- working conditions
- site lighting arrangements
- defects on equipment
- hazards and potential hazards
- coordination requirements/issues.

Safety information and procedures may be contained in:
- legislation and regulations
- relevant Australian standards
- management plans
- OH&S policy
- codes of practice
- manufacturer instructions
- safe working procedures (or equivalent)
- safety requirements including:
  - control and safety of travelling speed
  - selection and observance of safe working levels and angles
  - boarding and disembarking procedures
  - communications and signalling procedures.
**Work preparation** may include:
- avoidance of hazards
- identification of load
- identification and selection of lifting equipment
- inspection and certification of lifting equipment
- management of permits and tags.

**Australian Standards**, legislation and regulations must be consulted and applied:
- AS2550
- cranes and State based legislation and regulations.

**Site hazards** may include:
- facilities
- environment
- people
- other equipment
- dangerous materials.

**Signals** for load moving are given using methods which may include:
- verbal
- hand signals to Australian Standards
- whistles/hooters to Australian Standards
- two-way radio/telephones
- light signals to Australian Standards.

**Operator (operational) maintenance procedures** are those established and authorised for the site.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge procedures, requirements and instructions to operating a gantry crane on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective operation of a gantry crane on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. moving the crane
  b. setting up the crane
  c. lifting and positioning loads
  d. avoidance of hazards
  e. completing operator maintenance
  f. disposing of environmentally sensitive oils, fluids and materials.

**Required Knowledge**
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- Australian Standards related to cranes/lifting
- site and equipment safety requirements
- crane equipment characteristics, technical capabilities and limitations
- crane operational procedures
- crane maintenance systems and procedures
- basic rigging and slinging requirements
- hand and whistle signals
- site environmental requirements and constraints related to gantry cranes
- Hazchem relevant to gantry cranes.

**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- apply hand-eye coordination
- calculate volume weights
- access interpret and apply technical information
- maintain equipment records
- use relevant hand tools
- apply diagnostic techniques
- comply with environmental requirements
- dispose of environmentally sensitive fluids and materials.

**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be
accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**

Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1041A  Conduct non-slewing crane operations

Unit Descriptor
This unit covers the lifting and positioning of loads using a non-slewing crane other than gantry cranes.

Units Replaced
This unit replaces the following units:
• MNC.G41.A Conduct non-slewing crane operations.

Links outside this unit
The work covered in this unit relates to the NOHSC No: 1006 (2001) unit of competency for cranes.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT  PERFORMANCE CRITERIA

1  Plan and prepare for operations.
   1.1 Obtain, interpret and clarify / confirm work requirements in the form of shift briefings, handover details or work orders before proceeding.
   1.2 Access and apply safety information and procedures throughout the work.
   1.3 Prepare work in accordance with AS2550, legislation and manufacturer/site requirements.
   1.4 Resolve coordination activities with others at the site prior to commencement of, and during, the work activity.

2  Operate non-slewing crane.
   2.1 Carry out pre-start, start-up, park-up and shutdown procedures in accordance with Australian Standards, manufacturer and/or site requirements.
   2.2 Position crane safely prior to commencement of lift operations in accordance with Australian Standards, manufacturer specifications and approved man-basket operation procedures.
   2.3 Use relevant crane controls and functions within manufacturer specifications to effectively lift and position loads or personnel as required.
2.4 Act on or report monitoring systems and alarms in accordance with manufacturer instructions and site procedures.

2.5 Recognise and respond to hazardous and emergency situations in accordance with manufacturer instructions and site procedures.

2.6 Complete work in accordance with the agreed plan and outcomes and within the operating capacities of the allocated equipment.

3 Travel crane

3.1 Plan the route to be travelled to ensure that crane traverses firm and level surfaces.

3.2 Ensure necessary hazard identification and control measures are in place.

3.3 Travel the crane in accordance with Australian Standards, manufacturer instructions and site requirements.

4 Carry out multiple crane lift.

4.1 Obtain approval to carry out a multiple crane lift from the appropriate statutory authority.

4.2 Plan multiple lift and obtain approval for lifting plan by an authorised person.

4.3 Carry out the previously authorised plan of operations under the supervision of authorised person in accordance with the appropriate Australian Standard and other statutory regulations.

5 Carry out operator maintenance.

5.1 Carry out non slewing crane inspections and fault finding in accordance with manufacturer instructions and site requirements.

5.2 Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer instructions and site authorised procedures and practices.

5.3 Carry out minor maintenance to manufacturer instructions and site requirements.
5.4 Provide operator support during preparation for, and conduct of, major maintenance tasks in accordance with site requirements.

5.5 Process records in accordance with site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Shift briefings/handover details/work orders may include:
- crane equipment to be used
- nature and scope of tasks
- details of load chart/factors
- achievement targets
- working conditions
- site lighting arrangements
- defects on equipment
- hazards and potential hazards
- coordination requirements/issués.

Safety information and procedures may be contained in:
- legislation and regulations
- relevant Australian standards
- management plans
- OH&S policy
- codes of practice

manufacturer instructions
- safe working or job procedures.

Safety requirements may include:
- control and safety of travelling speed
- selection and observance of safe working levels and angles
- boarding and disembarking procedures
- communications and signalling procedures.

Work preparation may include:
- selection of stable base
- avoidance of obstacles and hazards
- identification of load
- identification and selection of lifting equipment
- inspection and certification of lifting equipment
- management of permits and tags.

Australian Standard, legislation and regulations may include:
- AS2550
• cranes and State based legislation and regulations.

**Crane controls and functions** may include:
• boom up
• boom down
• boom extensions
• hoist up
• hoist down
• manual jib extensions.

**Site hazards** may include:
• power lines
• trees
• overhead service lines
• bridges
• surrounding buildings
• obstructions
• structures
• facilities
• other equipment
• dangerous materials
• earthworks
• underground services.

**Planning multiple lifts** may include:
• an assessment of the load to be carried by each crane
• determination of the types of cranes suitable for use
• the safety margins and hazard control measures to be used in the lift
• the sequence of operations.

**Operator (operational) maintenance procedures** are those established and authorised for the site.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
• knowledge of procedures, requirements and instructions to operate a non slewing crane on a mine site
• implementation of appropriate procedures and techniques for the efficient and effective operation of a non slewing crane on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on non slewing crane operations
c. preparing a stable base
d. completing pre-start, start-up and shut-down procedures
e. relocating the crane
f. avoiding obstacles and hazards
g. setting up the crane
h. lifting and positioning loads
i. completing operator maintenance
j. disposing of environmentally sensitive oils, fluids and materials.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- Australian Standards related to cranes/lifting
- site and equipment safety requirements
- crane equipment characteristics, technical capabilities and limitations
- crane operational procedures
- crane maintenance systems and procedures
- basic geological and survey data related to non-slew cranes
- basic rigging and slinging requirements
- hand and whistle signals
- site environmental requirements and constraints related to non-slew cranes
- Hazchem relevant to non-slewing cranes.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- calculate volume weights
- access interpret and apply technical information
- maintain equipment records
- use relevant hand tools
- apply diagnostic techniques
- comply with environmental requirements
- dispose of environmentally sensitive fluids and materials.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit must be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1042A  Conduct slewing crane operations

Unit Descriptor
This unit covers the lifting and positioning of loads using a slewing crane.

Units Replaced
This unit replaces the following units:

- MNC.G42.A Conduct slewing crane operations.

Links outside this unit
The work covered in this unit relates to the NOHSC No: 1006 (2001) unit of competency for cranes.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

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<td>1.1 Obtain, interpret and clarify/confirm work requirements in the form of shift briefings, handover details or work orders are before proceeding.</td>
</tr>
<tr>
<td></td>
<td>1.2 Access and apply safety information and procedures throughout the work.</td>
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<td></td>
<td>1.3 Prepare work in accordance with AS2550, legislation and manufacturer/site requirements.</td>
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<td></td>
<td>1.4 Carry out assembly and dismantling of boom/jib in accordance with Australian Standards, manufacturer instructions and site requirements.</td>
</tr>
<tr>
<td></td>
<td>1.5 Resolve coordination activities with others at the site prior to commencement of, and during, the work activity.</td>
</tr>
<tr>
<td>2 Operate slewing crane.</td>
<td>2.1 Carry out pre-start, start-up, park-up and shutdown procedures in accordance with Australian Standards, manufacturer and/or site requirements.</td>
</tr>
<tr>
<td></td>
<td>2.2 Position, stabilise and level crane prior to commencement of lift operations in accordance with Australian Standards, manufacturer specifications and approved man-basket operation procedures.</td>
</tr>
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<td></td>
<td>2.3 Prepare load for lift in accordance with crane</td>
</tr>
</tbody>
</table>
limitations and rigging requirements

2.4 Confirm the work area is clear and safe prior to commencing the lift.

2.5 Use relevant *crane controls and functions* within manufacturer specifications to effectively lift and position loads or personnel as required.

2.6 Act on or report monitoring systems and alarms in accordance with site instructions/requirements.

2.7 Recognise and respond to hazardous and emergency situations in accordance with manufacturer instructions and site procedures.

2.8 Complete work in accordance with the agreed plan and outcomes and within the operating capacities of the allocated equipment.

3 Travel crane.

3.1 Plan the route to be travelled to ensure that crane traverses firm and level surfaces.

3.2 Ensure necessary *hazard* identification and control measures are in place.

3.3 Travel the crane in accordance with *Australian Standards*, manufacturer instructions and site requirements.

4 Carry out multiple crane lift.

4.1 Obtain approval to carry out a multiple crane lift from the appropriate statutory authority.

4.2 *Plan multiple lift* and obtain approval for lifting plan by an authorised person.

4.3 Carry out the previously authorised plan of operations under the supervision of and authorised person in accordance with the appropriate Australian Standard and other statutory regulations.

5 Carry out *operator maintenance*.

5.1 Carry out slewing crane inspections and fault finding in accordance with manufacturer instructions and site requirements.

5.2 Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer...
instructions and site authorised procedures and practices.

5.3 Carry out minor maintenance to manufacturer instructions and site requirements

5.4 Provide operator support during preparation for, and conduct of, major maintenance tasks in accordance with site requirements.

5.5 Process records in accordance with site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Shift briefings/handover details/work orders may include:
- crane equipment to be used
- nature and scope of tasks
- details of load chart/factors
- achievement targets
- working conditions
- site lighting arrangements
- defects on equipment
- hazards and potential hazards
- coordination requirements/issues.

Safety information and procedures may be contained in:
- legislation and regulations
- relevant Australian standards
- management plans
- OH&S policy
- codes of practice
- manufacturer instructions
- safe working or job procedures.

Safety requirements may include:
- control and safety of slewing speed
- selection and observance of safe working levels and angles
- avoidance of obstacles and hazards
- boarding and disembarking procedures
- observation of wind restrictions
- communications and signalling procedures.

Work preparation may include:
- selection of stable base
- avoidance of obstacles and hazards
• identification of load
• identification and selection of lifting equipment
• inspection and certification of lifting equipment
• fitting of optional implements/accessories
• management of permits and tags.

Australian Standard, legislation and regulations may include:
• AS2550
• cranes and State based legislation and regulations.

Crane controls and functions may include:
• boom up
• boom down
• boom extensions
• hoist up
• hoist down
• manual jib and fly-jib extensions
• slew.

Hazards may include:
• power lines
• trees
• overhead service lines
• bridges
• surrounding buildings
• obstructions
• structures
• facilities
• other equipment
• dangerous materials
• earthworks
• underground services
• time of day.

Planning multiple lifts may include:
• an assessment of the load to be carried by each crane
• determination of the types of cranes suitable for use
• the safety margins and hazard control measures to be used in the lift
• the sequence of operations.

Operator (operational) maintenance procedures are those established and authorised for the site

EVIDENCE GUIDE
Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
• knowledge of procedures, requirements and instructions to operate a slewing crane on a mine site
• implementation of appropriate procedures and techniques for the efficient and effective operation of a slewing crane on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on slewing crane operations
  c. preparing a stable base
  d. completing pre-start, start-up and shut-down procedures
  e. relocating the crane
  f. avoiding of obstacles and hazards
  g. setting up the crane
  h. lifting and positioning loads
  i. completing operator maintenance
  j. disposing of environmentally sensitive oils, fluids and materials.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
• Australian Standards related to cranes/lifting
• site and equipment safety requirements
• crane equipment characteristics, technical capabilities and limitations
• crane operational procedures
• crane maintenance systems and procedures
• basic geological and survey data related to slewing cranes
• basic rigging and slinging requirements
• hand and whistle signals
• site environmental requirements and constraints related to slewing cranes
• Hazchem relevant to slewing cranes.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
• apply operational safety requirements
• access interpret and apply technical information
• calculate volume weights
• maintain equipment records
• apply hand-eye coordination to control functions
• use relevant hand tools
• apply diagnostic techniques
• comply with environmental requirements
• dispose of environmentally sensitive fluids and materials.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.
Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1043A Conduct dogging operations

Unit Descriptor
This unit covers the directing of the crane / hoist operator in the movement of the load including when the load is out of view of the operator.

Units Replaced
This unit replaces the following units:
- MNC.G43.A Conduct dogging operations.

Links outside this unit
The work described in this unit relates to the National Occupational Health and Safety Certification Standards for Users and Operators of Industrial Equipment (NOHSC 1006)

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

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<tr>
<td>1</td>
<td>Plan for dogging.</td>
</tr>
<tr>
<td></td>
<td>1.1 Obtain, interpret and clarify work requirement and safety information and procedures before proceeding.</td>
</tr>
<tr>
<td></td>
<td>1.2 Develop a preliminary dogging plan and site sketch taking account of essential information.</td>
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<td>1.3 Check and confirm job feasibility and schedule with the load designer and other persons as appropriate.</td>
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<tr>
<td></td>
<td>1.4 Confirm hazards associated with the use of cranes and other load moving equipment and identify and check measures to eliminate or control these hazards with appropriate parties.</td>
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<tr>
<td></td>
<td>1.5 Finalise and confirm dogging plan, including the scheduling of required resources, as meeting the applicable Australian Standards, codes or practice and equipment manufacturer specifications.</td>
</tr>
<tr>
<td>2</td>
<td>Prepare for dogging.</td>
</tr>
<tr>
<td></td>
<td>2.1 Identify, select, inspect, assemble and certify as serviceable dogging equipment, materials and tools required for the plan in accordance with Australian Standards and codes of practice.</td>
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<td></td>
<td>2.2 Label and repair or destroy unserviceable equipment, materials and tools in accordance with Mine Managers Rules and Schemes.</td>
</tr>
</tbody>
</table>
3 Move loads.

3.1 Calculate and confirm appropriate safe working loads and centre gravity using load charts and standard calculation rules prior to load moving.

3.2 Perform load moving in accordance with the plan, acceptable safe work practices and appropriate Australian Standards, codes of practice and manufacturer specifications.

3.3 Perform work safely at heights, within uncompleted structures and / or in confined and enclosed spaces.

3.4 Connect lifting gear to load to Australian Standards and manufacturer specifications.

3.5 Connect load to movement device using appropriate and certified equipment in accordance with the Australian Standards and manufacturer specifications.

3.6 Ensure stability of the load by application of load movement procedure, temporary bracing and / or load support appropriate to the task and related manufacturer specifications.

3.7 Follow appropriate designers specifications during the placement and securing of the load.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Unless otherwise specified, dogging is to conform with the requirements of the National Occupational Health and Safety Certification Standards for Users and Operators of Industrial Equipment (NOHSC : 1006).

Work requirement and safety information and procedures may include:
- shift briefings
- handover details
- work orders
- legislation and regulations
- relevant Australian Standards
- management plans
- OH&S policy
- codes of practice
- manufacturer instructions
- safe working or job procedures (or equivalents)
- work briefings including:
  - site plans and drawings
- work specifications
- basic working plans and material schedules
- the confirmed mass and dimensions of loads
- the capacities and availability of load shifting equipment.

**Preliminary dogging plan** may include:
- confirmed details of dogging requirement
- confirmed dimensions
- site access and egress
- suitability and availability of materials
- tools and equipment
- identification of potential hazards
- probable control measures
- identification of site coordination requirements.

**Equipment** may include:
- slings
- ropes
- shackles
- eye bolts
- spreader beams.

**Safety information and procedures** may be contained in:
- legislation and regulations
- relevant Australian Standards
- management plans
- OH&S policy
- codes of practice
- manufacturer instructions
- safe working procedures (or equivalents).

**Signals for load moving** are to include those which are communicated:
- verbally
- with hand signals whistles/hooters and light signals to Australian Standards
- with two-way radio / telephones.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to conduct dogging operations on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective conduct of dogging operations on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
b. interpreting and communicating information on dogging operations

c. Completing essential functions including:
   
   c.1. site preparation
   c.2. assess and select appropriate certified equipment
   c.3. inspection of lifting gear
   c.4. connection of loads to lifting gear
   c.5. moving loads
   c.6. direction of crane / hoist operation
   c.7. equipment maintenance
   c.8. restoring the site.

**Required Knowledge**

Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- appropriate National Certification Standards
- site and equipment safety requirements
- equipment characteristics, technical capabilities and limitations
- operational and maintenance procedures
- hand and whistle signals
- potential hazards.

**Required Skills**

Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- apply operational safety requirements
- access, interpret and apply technical information
- maintain equipment records
- apply hand - eye coordination
- use relevant hand tools
- identify hazards.

**Assessment and Interdependence of Units**

This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**

There are no pre-requisite units for this unit.

**Resource Implications**

Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**

To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.
Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1044A Conduct basic rigging operations

Unit Descriptor
This unit covers work involving the use of mechanical load shifting equipment and associated gear to move, place or secure a load.

Units Replaced
This unit replaces the following units:
- MNC.G44.A Conduct basic rigging operations

Links outside this unit
The work described in this unit relates to the National Occupational Health and Safety Certification Standards for Users and Operators of Industrial Equipment (NOHSC: 1006).

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT PERFORMANCE CRITERIA

1 Plan for rigging.

1.1 Obtain, interpret and clarify / confirm work requirements before proceeding.

1.2 Develop a preliminary rigging plan and site sketch taking account of essential information.

1.3 Check and confirm job feasibility and schedule with the client, the load designer and other persons as appropriate.

1.4 Confirm hazards associated with the use of cranes and other load moving equipment and identify and check measures to eliminate or control these hazards with appropriate parties.

1.5 Finalise and confirm rigging plan, including the scheduling of required resources, as meeting the applicable legislation and safety procedures and equipment manufacturer specifications.

2 Prepare for rigging.

2.1 Identify, select, inspect, assemble and confirms certification as serviceable rigging equipment, materials and tools required for the plan in accordance with Australian Standards and codes of practice.

2.2 Label and repair or destroy unserviceable equipment, materials and tools in accordance with Mine Managers Rules and Schemes.
3 Move loads.

3.1 Calculate and confirm appropriate safe working loads and centre gravity using load charts and standard calculation rules prior to load moving.

3.2 Perform load moving in accordance with the plan, acceptable safe work practices and appropriate Australian Standards, codes of practice and manufacturer specifications.

3.3 Perform work safety at heights, within incomplete structures and/or in confined and enclosed spaces.

3.4 Connect lifting gear to load to Australian Standards and manufacturer specifications.

3.5 Connect load to movement device using appropriate and certified equipment in accordance with the Australian Standards and manufacturer specifications.

3.6 Ensure stability of the load by application of load movement procedure, temporary bracing and/or load support appropriate to the task and related manufacturer specifications.

3.7 Follow appropriate designer’s specifications during the placement and securing of the load.

3.8 Dismantle and remove / restore load shifting equipment in accordance with site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Work requirements may be in the form of:
- shift briefings
- handover details
- work orders.

Preliminary rigging plan may include:
- confirmed details of rigging requirement
- confirmed dimensions
- site access and egress
- suitability and availability of materials
- tools and equipment
• identification of potential hazards
• control measures
• identification of site coordination requirements.
Equipment range in dogging and rigging work associated with:
- steel erection
- particular hoists
- placement of pre-cast concrete
- safety nets and static lines
- mast climbers
- perimeter safety screens and shutters
- cantilevered crane loading platforms
- slinging and directing of loads
but excludes the following:
- rigging of cranes
- hoists
- conveyors
- dredges and excavators
- tilt-slabs
- rigging work associated with demolition
- dual lifts
- rigging of gin poles
- shear legs
- flying foxes and cableways
- guyed derricks and structures
- suspended and hung scaffolds.

Unless otherwise specified, rigging is to conform with the requirements of the National Occupational Health and Safety Certification Standards for Users and Operators of Industrial Equipment (NOHSC: 1006).

Legislation and safety procedures may include:
- legislation and regulations
- relevant Australian standards
- management plans
- OH&S policy
- codes of practice

manufacturer instructions
- safe working or job procedures (or equivalents).

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to conduct basic rigging operations on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective conduct of basic rigging operations on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
a. applying personal and operational safety procedures
b. interpreting and communicating information on basic rigging operations
c. completing of plan or sketch
d. assessment and selection of appropriate certified equipment
e. preparing site
f. moving loads (using basic equipment)
g. calculating safe working loads/centre of gravity
h. slinging and directing of loads
i. connecting lifting gear
j. stabilising load
k. placing load
l. coordinating work
m. operation, maintenance and storage.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- the appropriate National Certification Standards
- site and equipment safety requirements
- equipment characteristics, technical capabilities and limitations
- operational and maintenance procedures
- hand and whistle signals.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
- apply operation safety requirements
- access, interpret and apply technical information
- maintain equipment records
- apply hand-eye coordination
- use relevant hand tools
- apply diagnostic techniques
- identify potential hazards.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**

This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**

Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1045A Conduct intermediate rigging operations

Unit Descriptor
This unit covers work involving the use of mechanical load shifting equipment and associated gear to move, place or secure a load.

Units Replaced
This unit replaces the following units:
- MNC.G45.A Conduct intermediate rigging operations.

Links outside this unit
The work described in this unit relates to the National Occupational Health and Safety Certification Standards for Users and Operators of Industrial Equipment (NOHSC: 1006).

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT PERFORMANCE CRITERIA

1 Plan for rigging.

1.1 Obtain, interpret and clarify work requirements before proceeding.

1.2 Develop a preliminary rigging plan and site sketch taking account of essential information.

1.3 Check and confirm job feasibility and schedule with the client, the load designer and other persons as appropriate.

1.4 Confirm hazards associated with the use of cranes and other load moving equipment and identify and check measures to eliminate or control these hazards with appropriate parties.

1.5 Finalise and confirm rigging plan, including the scheduling of required resources, as meeting the applicable legislation and safety procedures and equipment manufacturer specifications.

2 Prepare for rigging.

2.1 Identify, select, inspect, assemble and certify as serviceable rigging equipment, materials and tools required for the plan in accordance with Australian Standards and codes of practice.

2.2 Label and repair or destroy unserviceable equipment, materials and tools in accordance with Mine Manager’s Rules and Schemes.
3 Move loads.

3.1 Calculate and confirm appropriate safe working loads and centre gravity using load charts and standard calculation rules prior to load moving.

3.2 Perform load moving in accordance with the plan, acceptable safe work practices and appropriate Australian Standards, codes of practice and manufacturer specifications.

3.3 Perform work safely at heights, within incomplete structures and/or in confined and enclosed spaces.

3.4 Connect lifting gear to load to Australian Standards and manufacturer specifications.

3.5 Connect load to movement device using appropriate and certified equipment in accordance with the Australian Standards and manufacturer specifications.

3.6 Ensure stability of the load by application of load movement procedure, temporary bracing and/or load support appropriate to the task and related manufacturer specifications.

3.7 Follow appropriate designers specifications during the placing and securing of the load.

3.8 Dismantle and remove/restore load shifting equipment in accordance with site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Work requirements may be in the form of:
- shift briefings
- handover details
- work orders.

Preliminary rigging plan may include:
- confirmed details of rigging requirement
- confirmed dimensions
- site access and egress
- suitability and availability of materials, tools and equipment
- identification and potential hazards.
• probably control measure and identification of site coordination requirements.

Unless otherwise specified, rigging is to conform with the requirements of the National Occupational Health and Safety Certification Standards for Users and Operators of Industrial Equipment (NOHSC: 1006).

**Equipment** range in dogging and rigging work associated with steel erection:
- all hoists
- safety nets and static lines
- mast climbers
- perimeter safety screens and shutters
- cantilevered crane loading platforms

**Intermediate equipment** range may include:
- rigging of cranes
- hoists
- conveyors
- dredges and excavators
- tilt-slabs
- rigging work associated with demolition
- dual lifts

but **excludes** the following:
- rigging of gin poles
- shear legs
- flying foxes and cableways
- guyed derricks and structures
- suspended and hung scaffolds.

**Legislation and safety procedures** may include:
- legislation and regulations
- relevant Australian standards
- management plans
- OH&S policy
- codes of practice
- manufacturer instructions
- safe working or job procedures (or equivalents).

**Work requirements/briefings** may include:
- site plans and drawings
- work specifications
- basic working plans and material schedules
- confirmed mass and dimensions of loads
- capacities and availability of load shifting equipment.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to conduct intermediate rigging operations on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective conduct of intermediate rigging operations on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on intermediate rigging operations
  c. completing plan or sketch
  d. assessing and selecting appropriate certified equipment
  e. site preparation
  f. moving loads (using intermediate equipment)
  g. calculating safe working loads / centre of gravity
  h. connecting lifting gear
  i. stabilising load
  j. placing load
  k. coordinating work
  l. operation, maintenance and storage.

**Required Knowledge**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- the appropriate National Certification Standards
- site and equipment safety requirements
- equipment characteristics, technical capabilities and limitations
- operational and maintenance procedures
- hand and whistle signals.

**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- apply operation safety requirements
- access, interpret and apply technical information
- maintain equipment records
- apply hand-eye coordination
- use relevant hand tools
- apply diagnostic techniques
- identify potential hazards

**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.
Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1046A   Conduct basic scaffolding operations

Unit Descriptor
This unit covers the erection, alteration or dismantling of a temporary structure, specifically erected to support work platforms.

Units Replaced
This unit replaces the following units:
• MNC.G46.A Conduct basic scaffolding operations.

Links outside this unit
The work described in this unit relates to the National Occupational Health and Safety Certification Standards for Users and Operators of Industrial Equipment (NOHSC: 1006).

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT   PERFORMANCE CRITERIA
1  Plan for operations.  1.1  Obtain, interpret and clarify/confirm work requirements before proceeding.

1.2  Develop a preliminary scaffolding plan and site sketch taking account of essential information.

1.3  Check and confirm job feasibility and schedule with other persons as appropriate.

1.4  Confirm hazards associated with scaffolding and identify and check measures to eliminate or control these hazards with the appropriate parties.

1.5  Finalise and confirm the scaffolding plan, including the scheduling of required resources as meeting the applicable Australian Standards, codes of practice and manufacturer requirements.

2  Prepare for scaffolding.

2.1  Identify, select, inspect and certify as serviceable scaffolding equipment, materials and tools required for the job in accordance with codes of practices and guides.

2.2  Label and repair unserviceable scaffolding equipment, materials and tools or destroyed in accordance with mine manager’s rules and schemes.

2.3  Prepare scaffolding/equipment gear in accordance with codes of practice and guides.
2.4 Arrange and coordinate transportation of equipment and tooling to the worksite in accordance with the scaffolding plan.

2.5 Prepare the site for scaffolding.
3 Erect scaffolding. 3.1 Carry out erection for appropriate types of scaffolding in accordance with hazard prevention and control measure and to Australian Standards and manufacturer requirements.

3.2 Perform work safely at heights, on incomplete structures and in confined spaces.

3.3 On completion, leave the site clean of all surplus components, equipment, tools and debris and inspect the scaffolding/equipment for safety in compliance with design and statutory requirements.

4 Maintain scaffolding. 4.1 Inspect critical structural and safety areas of the scaffolding/equipment to identify any variation from the plan.

4.2 Perform alteration or repair with due regard for the critical safety and structural areas of the scaffolding equipment to manufacturer requirements and Australian Standards.

5 Dismantle scaffolding. 5.1 Dismantle scaffolding in a safe and orderly manner.

5.2 Inspect, classify and label and remove from the site in accordance with the Australian Standards and enterprise procedures.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Work requirements may be in the form of:
- shift briefings
- handover details
- work orders.

Preliminary scaffolding plan may include confirmed details of:
- scaffolding requirement
- scaffolding / equipment configuration
- identification of potential hazards
- control measures
- site access and egress
- estimate of types and quantities of components
- identification of scaffolding coordination requirements.
**Scaffolding equipment** is to include:
- free standing prefabricated scaffolds
- cantilevered hoists with a working load limit not exceeding 500kg (materials only)
- ropes
- gin wheels
- safety nets and static lines
- bracket scaffolds (tank and formwork).

but is to **exclude**:
- cantilevered crane loading platforms
- cantilevered and spurred scaffolds
- barrow ramps and sloping platforms
- scaffolding associated with perimeter safety screens and shutters mast climbers
- rube and coupler scaffolds, including tube and coupler covered ways and gantries
- hung scaffolds
- including scaffolds hanging from tubes
- wire ropes and chains
- suspended scaffolds (see Intermediate Scaffolding, U47, if these are to be used).

**Critical structural and safety areas** to be inspected may include:
- damage
- corrosion
- wear
- stability
- current usage checked against type of scaffolding / equipment and identify any changes to the plan / scaffolding through the inspection log.

Unless otherwise specified, **scaffolding** is to conform with the requirements of the National Occupational Health and Safety Certification Standards for Users and Operators of Industrial Equipment (NOHSC: 1006).

**Safety information and procedures** may be contained in:
- legislation and regulations
- relevant Australian standards
- management plans
- OH&S policy
- codes of practice
- manufacturer instructions
- safe working or job procedures (or equivalents).

**Work briefings** may include:
- work tasks
- site plans and drawings
- scaffolding / equipment designs
- work specifications.

**Site preparation** may include:
- site isolation
- erection of barriers
• installation of signage  
• assembly and erection of lifting devices  
• establishment of footings.

EVIDENCE GUIDE

Critical Aspects of Evidence

The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

• knowledge of procedures, requirements and instructions to conduct basic scaffolding activities on a mine site
• implementation of appropriate procedures and techniques for the efficient and effective conduct of basic scaffolding activities on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on basic scaffolding operations
  c. site preparation and planning
  d. assessing and selecting appropriate certified equipment
  e. Completing essential functions including:
     e.1. handling procedures
     e.2. erecting procedures
     e.3. dismantling procedures
     e.4. maintenance and storage of equipment.

Required Knowledge

Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

• appropriate National Certification Standards
• site and equipment safety requirements
• equipment characteristics, technical capabilities and limitations
• operational and maintenance procedures.

Required Skills

Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

• apply operational safety requirements
• access, interpret and apply technical information
• maintain equipment records
• apply hand-eye coordination
• use relevant hand tools
• identify hazards.
Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1047A  Conduct intermediate scaffolding operations

Unit Descriptor
This unit covers the erection, alteration or dismantling of a temporary structure, specifically erected to support work platforms.

Units Replaced
This unit replaces the following units:
• MNC.G47.A Conduct intermediate scaffolding operations.

Links outside this unit
The work described in this unit relates to the National Occupational Health and Safety Certification Standards for Users and Operators of Industrial Equipment (NOHSC : 1006)

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

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<td>1.1 Obtain, interpret and clarify/confirm work requirements before proceeding.</td>
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<td>1.2 Develop a preliminary scaffolding plan and site sketch taking account of essential information.</td>
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<td>1.3 Check and confirm job feasibility and schedule with other persons as appropriate.</td>
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<td>2 Prepare for scaffolding.</td>
<td>2.1 Identify, select, inspect and certify as serviceable scaffolding equipment, materials and tools required for the job in accordance with codes of practice and guides.</td>
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<td>2.2 Label and repair or destroy unserviceable scaffolding equipment, materials and tools in accordance with mine manager’s rules and schemes.</td>
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<td>2.3 Prepare scaffolding / equipment gear in accordance with codes of practice and guides.</td>
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<td>2.4 Arrange and coordinate transportation of equipment and tools to the worksite in accordance with the scaffolding plan.</td>
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</table>
2.5 Prepare the site for scaffolding.
3 Erect scaffolding. 3.1 **Carry out erection for appropriate types of scaffolding in accordance with hazard prevention and control measures and to Australian Standards and manufacturer requirements.**

3.2 Perform work safely at heights, on incomplete structures and in confined spaces.

3.3 On completion leave the site clean of all surplus components, equipment, tools and debris and inspect the scaffolding / equipment for safety in compliance with design and statutory requirements.

4 Maintain scaffolding. 4.1 Inspect **critical structural and safety areas** of the scaffolding/equipment to identify any variation from the plan.

4.2 **Perform alteration or repair with due regard for the critical safety and structural areas of the scaffolding/equipment to manufacturer requirements and Australian Standards.**

5 Dismantle scaffolding. 5.1 Dismantle scaffolding in a safe and orderly manner.

5.2 Inspect, classify, label and remove equipment from the site in accordance with the Australian Standards and enterprise procedures.

**RANGE STATEMENT**
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

**Work requirements** may be in the form of:
- shift briefings
- handover details
- work orders.

**Critical structural and safety areas** to be inspected may include:
- damage
- corrosion
- wear
- stability
- current usage checked against type of scaffolding / equipment
- identify any changes to the plan / scaffolding through the inspection log.

Unless otherwise specified, scaffolding is to confirm with the requirements of the National Occupational Health and Safety Certification Standards for Users and Operators of Industrial Equipment NOHSC: 1006.
Safety information and procedures may be contained in:
- legislation and regulations
- relevant Australian standards
- management plans
- OH&S policy
- codes of practice
- manufacturer instruction
- safe working or job procedures (or equivalents).

Basic scaffolding equipment range is to include:
- free standing prefabricated scaffolds
- cantilevered hoists with a working load limit not exceeding 500kg (materials only)
- ropes
- gin wheels
- safety nets and static lines
- bracket scaffolds (tank and formwork).

Intermediate scaffolding equipment range is to include:
- cantilevered crane loading platforms
- cantilevered and spurred scaffolds
- barrow ramps and sloping platforms
- scaffolding associated with perimeter safety screens and shutters
- mast climbers

but excludes work including:
- hung scaffolds, including scaffolds hanging from tubes, wire ropes and chains
- suspended scaffolds.

Work requirements/briefings may include:
- work tasks
- site plans and drawings
- scaffolding / equipment designs
- work specifications.

Preliminary scaffolding plan may include:
- confirmed details of scaffolding requirement
- scaffolding / equipment configuration
- identification of potential hazards
- probable control measures
- site access and egress
- estimate of types and quantities of components
- identification of scaffolding coordination requirements.

Site preparation may include:
- site isolation
- erection of barriers
- installation of signage
- assembly and erection of lifting devices
- establishment of footings.
EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to conduct intermediate scaffolding operations on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective conduct of intermediate scaffolding operations on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on basic scaffolding operations
  c. site preparation and planning
  d. assessment and selection of appropriate certified equipment
  e. completing essential functions including:
     e.1. handling procedures
     e.2. erecting procedures
     e.3. dismantling procedures
     e.4. maintaining and storing equipment.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- appropriate National Certification Standards
- site and equipment safety requirements
- equipment characteristics, technical capabilities and limitations
- operational and maintenance procedures.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- apply operational safety requirements
- access, interpret and apply technical information
- maintain equipment records
- apply hand-eye coordination
- use relevant hand tools
- identify hazards.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.
Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1048A Conduct forklift operations

Unit Descriptor
This unit covers the lifting and relocating of loads using a commercial forklift, generally in a surface situation.

Units Replaced
This unit replaces the following units:
• MNC.G48.A Conduct forklift operations.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Plan and prepare for operations.</td>
<td>1.1 Obtain, interpret and clarify / confirm work requirements/briefings before proceeding.</td>
</tr>
<tr>
<td></td>
<td>1.2 Access and apply safety information and procedures throughout the operations.</td>
</tr>
<tr>
<td></td>
<td>1.3 Fit and remove attachments in accordance with manufacturer specifications and site requirements.</td>
</tr>
<tr>
<td></td>
<td>1.4 Coordinate activities with others at the site prior to commencement of, and during, the work activity.</td>
</tr>
<tr>
<td>2 Operate forklift.</td>
<td>2.1 Carry out pre-start, start-up, park-up and shutdown procedures in accordance with manufacturer and/or site specific requirements.</td>
</tr>
<tr>
<td></td>
<td>2.2 Monitor and anticipate traffic flow and work area conditions to facilitate safe operations and to ensure the most efficient route of travel is selected and used.</td>
</tr>
<tr>
<td></td>
<td>2.3 Manoeuvre and position forklift smoothly in accordance with manufacturer and site procedures.</td>
</tr>
<tr>
<td></td>
<td>2.4 Secure, lift, transfer and place load in accordance with manufacturer instructions and site procedures.</td>
</tr>
<tr>
<td></td>
<td>2.5 Use forklift attachments in accordance with manufacturer specifications and site requirements.</td>
</tr>
<tr>
<td></td>
<td>2.6 Act on or report monitoring systems and alarms in accordance with site instruction / requirements.</td>
</tr>
</tbody>
</table>
2.7 Recognise and respond to hazardous and emergency situations in accordance with manufacturer instructions and site procedures.

2.8 Complete work in accordance with the agreed plan and outcomes and within the operating capacities of the allocated equipment.

3 Carry Out operator maintenance.

3.1 Carry out forklift inspections and fault finding in accordance with manufacturer instructions and site requirements.

3.2 Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer instructions and site authorised procedures and practices.

3.3 Carry out minor maintenance to manufacturer instructions and site requirements.

3.4 Process records in accordance with site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Work requirements/briefings may include:
• shift briefings
• handover details
• work orders
• nature and scope of tasks
• details and loads
• achievements targets
• working conditions
• site lighting arrangements
• defects of equipment
• hazards and potential hazards
• coordination requirements / issues.

Safety information and procedures may be contained in:
• legislation and regulations
• relevant Australian Standards
• management plans
• OH&S policy
• codes of practice
• manufacturer instructions
• safe working or job procedures or equivalents.

Safe operations may include:
• load safety and security
• traffic clearance
• working within the limits and specifications
• operational signal procedures.

Forklifts may be powered by:
• diesel
• gas
• electric.

Forklift attachments may include:
• tyre handler
• lifting device
• slipper forks.

Site hazards may include:
• power lines
• trees
• overhead service lines
• bridges
• surrounding buildings
• obstructions
• structures
• facilities
• other equipment
• dangerous material
• earthworks
• underground services.

Operator (operational) maintenance procedures are those established and authorised for the site.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
• knowledge of procedures, requirements and instructions to conduct forklift operation on a mine site
• implementation of appropriate procedures and techniques for the efficient and effective forklift operation on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on forklift operations
  c. completing forklift pre-start, start-up and shut-down procedures
  d. completing essential functions including:
     d1 smooth manoeuvring and positioning of forklift
     d2 lifting, securing, transferring and positioning of loads
     d3 applying emergency procedures
     d4 completing operator maintenance
     d5 disposing of environmentally sensitive oils, fluids and materials.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
• site and equipment safety requirements
• forklift equipment characteristics, technical capabilities and limitations
• forklift operational procedures
• forklift maintenance systems and procedures
• basic geological and survey data related to forklift operations
• site environmental requirements and constraints related to forklift operations.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
• apply operational safety requirements
• access, interpret and apply technical information
• maintain equipment records
• apply hand-eye coordination in the control of forklift
• use relevant hand tools
• apply diagnostic techniques
• apply site environmental constraints
• dispose of environmentally sensitive oils, fluids and materials.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.
Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1049A  Operate elevating work platform

Unit Descriptor
This unit covers the elevation, relocation and positioning of personnel and equipment using an elevating work platform (EWP).

Units Replaced
This unit replaces the following units:
- MNC.C49.A Operate elevating work platform.

Links outside this unit
The work described in this unit generally relates to the National Occupational Health and Safety Certifications Standards for Users and Operators of Industrial Equipment (NOHSC: 1006 [2001]).

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>Obtain, interpret and clarify work requirements and briefings before proceeding.</td>
</tr>
<tr>
<td>1.2</td>
<td>Access and apply safety information and procedures throughout the operations.</td>
</tr>
<tr>
<td>1.3</td>
<td>Perform equipment pre-operational checks, according to manufacturer specifications and/or authorised site procedures.</td>
</tr>
<tr>
<td>1.4</td>
<td>Coordinate activities with others at the site prior to commencement of, and during, the work activity.</td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>Carry out pre-start, start-up, park-up and shut-down procedures in accordance with manufacturer specifications and site procedures.</td>
</tr>
<tr>
<td>2.2</td>
<td>Operate equipment within recommended speed, engine capability and limitations according to manufacturer specifications.</td>
</tr>
<tr>
<td>2.3</td>
<td>Manoeuvre equipment to maximise efficiency and ensure safety of other equipment and personnel.</td>
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<tr>
<td>3</td>
<td></td>
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<tr>
<td>3.1</td>
<td>Stabilise work platform and select attachments according to site conditions, manufacturer</td>
</tr>
</tbody>
</table>
3.2 Use approved safety devices to ensure safety of personnel and surround site in accordance with site procedure and legislative requirements.

3.3 Act on or report monitoring systems and alarms in accordance with manufacturer instructions and site procedures.

3.4 Recognise and respond to hazardous and emergency situations in accordance with manufacturer instructions and site procedures.

3.5 Complete work in accordance with agreed work plan, site procedures and regulations.

4 Carry out operator maintenance.

4.1 Carry out work platform inspections and fault finding in accordance with manufacturer instructions and site requirements.

4.2 Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer instructions and site authorised procedures and practices.

4.3 Carry out minor maintenance to manufacturer instructions and site requirements.

RANGE STATEMENT

The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Work requirements/briefings may include:

- shift briefings
- handover details
- work orders
- equipment to be used
- nature and scope of tasks
- load details
- achievement targets
- working conditions
- site lighting arrangements
- defects on equipment
- hazards and potential hazards
- coordination requirements.
Safety information and procedures may be contained in:
- legislation and regulations
- relevant Australian Standards
- management plans
- OH&S policy
- codes of practice
- manufacturer instructions
- safe working or job procedures (or equivalents).

Unless otherwise specified, EWP operations are to conform with the requirements of the National Occupational Health and Safety Certifications Standards for Users and Operators of Industrial Equipment (NOHSC : 1006 [2001]).

Elevating work platforms may be titled locally as:
- EWP
- cherry pickers
- skyworkers
- scissor lift
- trailer-mounted lifts
- sky-cranes
- boom lift.

The definition of equipment to be covered by this unit will need to be made by the mine in accordance with appropriate legislative and regulatory requirements.

Specific safety requirements are to include:
- control and safety of raising and lowering booms
- slewing and telescoping
- deployment of outriggers
- stabilisers
- preparation of safety harnesses and blocking.

Pre-operational checks may include:
- selection of stable base
- avoidance of obstacles and hazards
- identification of load
- inspection and certification of equipment
- management of permits and tags.

Site hazards may include:
- power lines
- facilities
- trees
- other equipment
- overhead service lines
- dangerous materials
- bridges
• underground services
• surrounding buildings
• recently filled trenches
• obstructions
• structures.

Operator (operational) maintenance procedures are those established and authorised for the site.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
• knowledge of procedures, requirements and instructions to operate elevating work platform on a mine site
• implementation of appropriate procedures and techniques for the efficient and effective operation of an elevating work platform on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on elevating work platform operations
  c. selecting and preparing ground
  d. completing pre-start, start-up and shut-down procedures
  e. completing essential functions including:
     e1. deploying outriggers, stabilisers and blocking
     e2. raising, lowering, slewing and telescoping the boom and platform
  f. completing operator maintenance
  g. disposing of environmentally sensitive oils, fluids and materials.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
• the appropriate National Certification Standards
• site and equipment safety requirements
• equipment characteristics, technical capabilities and limitations
• elevating work platform operational procedures
• basic geological and survey data related to elevating work platforms
• site environmental requirements and constraints related to elevating work platforms.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
• apply operational safety requirements
• identify hazards and potential hazards
• apply hand-eye coordination to control functions
• access, interpret and apply technical information
• maintain equipment records
• use relevant hand tools
• apply diagnostic techniques
• apply environmental constraints and procedures
• dispose of environmentally sensitive oils, fluids and materials.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
• observation of processes and procedures
• oral and/or written questioning on required knowledge and skills
• testimony from supervisors, colleagues, clients and/or other appropriate persons
• inspection of the final product or outcome
• a portfolio of documentary evidence
• simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.
Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1050A  Operate vehicle loading crane

Unit Descriptor
This unit covers the lifting and positioning of loads using a vehicle loading crane.

Units Replaced
This unit replaces the following units:
- MNC.G50.A Operate vehicle loading crane.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

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<td>Plan and prepare for operations.</td>
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<tr>
<td>1.1</td>
<td>Obtain, interpret and clarify work requirements before proceeding.</td>
</tr>
<tr>
<td>1.2</td>
<td>Access and apply safety information and procedures throughout the work.</td>
</tr>
<tr>
<td>1.3</td>
<td>Prepare work in accordance with Australian Standards and manufacturer /site requirements.</td>
</tr>
<tr>
<td>1.4</td>
<td>Carry out assembly and dismantling of attachments in accordance with Australian Standards, manufacturer instructions and site requirements.</td>
</tr>
<tr>
<td>1.5</td>
<td>Determine and implement no-go zones around operator’s control panel where crane should not be operated or slewed into.</td>
</tr>
<tr>
<td>2</td>
<td>Operate vehicle loading crane.</td>
</tr>
<tr>
<td>2.1</td>
<td>Coordinate activities with others at the site prior to commencement of, and during, the work activity.</td>
</tr>
<tr>
<td>2.2</td>
<td>Carry out pre-start, start-up, park-up and shutdown procedures in accordance with Australian Standards and manufacturer instructions and site procedures.</td>
</tr>
<tr>
<td>2.3</td>
<td>Position, stabilise and level vehicle prior to commencement of lift operations in accordance with Australian Standards and manufacturer specifications.</td>
</tr>
<tr>
<td>2.4</td>
<td>Prepare load for lift in accordance with vehicle limitations and rigging requirements.</td>
</tr>
<tr>
<td>2.5</td>
<td>Confirm work area is clear and safe prior to commencing the lift.</td>
</tr>
</tbody>
</table>
2.6. Determine crane operating hazards and operate stationary crane from a safe location.

2.7. Use relevant crane controls and functions within manufacturer specifications to effectively lift and position loads or personnel as required.

2.8. Direct crane operations using recommended load moving signals.

2.9. Carefully monitor crane hook movement and location.

2.10. Ensure that no work takes place under crane boom.

2.11. Act on or report monitoring systems and alarms in accordance with site instructions/requirements.

2.12. Recognise and respond to hazardous and emergency situations in accordance with manufacturer instructions and site procedures.

2.13. Complete work in accordance with the agreed plan and outcomes and within the operating capacities of the allocated equipment.

3 Carry Out operator maintenance.

3.1 Carry out daily/shift vehicle inspections and fault finding in accordance with manufacturer instructions and site requirements.

3.2 Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer instructions and site authorised procedures and practices.

3.3 Carry out minor maintenance to manufacturer instructions and site requirements.

3.4 Process records in accordance with site requirements.

3.5 Record the results of daily/shift inspections, and any defects found, in the Log Book.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.
Work requirements may be in the form of:
- shift briefings
- handover details, and/or
- work orders
- stable base
- avoidance of obstacles/hazards
- identification of load
- identification and selection of lifting equipment
- inspection and certification of lifting equipment
- fitting of optional implements / accessories
- management of permits and tags.

Safety information and procedures may be contained in:
- legislation and regulations
- relevant Australian Standards
- management plans
- OH&S policy
- codes of practice
- manufacturer instructions
- safe working or job procedures (or equivalents).

Australian Standard AS2550, cranes and State based legislation and regulations must be consulted and applied.

No-go zone information can be obtained from:
- drawings
- photographs
- videos.

Attachments may include:
- tyre manipulation
- forks
- any other commercially or site produced attachment.

Crane operating hazards may include:
- control and safety of slewing speed
- selection and observance of safe working levels and angles
- avoidance of obstacles and hazards
- boarding and disembarking procedures
- observation of wind restrictions
- communications and signalling procedures.

Crane controls and functions may include:
- boom up
- boom down
- boom extensions
- hoist up
• hoist down
• manual jib and fly-jib extensions
• slew.
**Load moving signals** are given using methods which may include:
- verbal
- hand signals to Australian Standards
- whistles / hooters to Australian Standards
- two-way radio / telephone
- light signals to Australian Standards.

**Hazardous and emergency situations** may include:
- power lines
- trees
- overhead service lines
- bridges
- surrounding buildings
- obstructions
- structures
- facilities
- other equipment
- dangerous material
- earthworks
- underground services
- time of day.

**Operator (operational) maintenance** procedures are those established and authorised for the site.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to operate vehicle loading cranes appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective operation of vehicle loading cranes appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. strictly observing site safety procedures associated with hazards arising from working around stationary operating cranes
  c. implementing no-go zones around operator’s control panel
  d. observing movement and location of crane hook
  e. carrying out inspections and reporting defects
  f. interpreting and communicating information on vehicle loading crane operations
  g. completing pre-start, start-up and shut-down procedures
  h. completing operator maintenance
  i. completing essential functions including:
    i.1. avoidance of obstacles and hazards
i.2. setting up the vehicle
i.3. lifting and positioning loads.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- interpreting information to determine and implement no-go areas
- not working under crane booms
- observing and monitoring crane hook location and movement
- Australian Standards related to lifting
- site and equipment safety requirements
- vehicle equipment characteristics, technical capabilities and limitations
- vehicle operational procedures
- vehicle maintenance systems and procedures
- basic geological and survey data related to vehicle loading cranes
- basic rigging and slinging requirements
- hand and whistle signals
- site environmental requirements and constraints
- Hazchem relevant to vehicle loading cranes.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- apply operational safety requirements
- access, interpret technical information
- calculate volume weights
- maintain equipment records
- apply hand-eye co-ordination to control functions
- use relevant hand tools
- apply diagnostic techniques
- apply environmental constraints and procedures
- dispose of environmentally sensitive fluids and materials.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Prerequisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.
**Consistency in Performance**
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1055A Extend, retract and maintain conveyor componentry

Unit Descriptor
This unit covers the extension, retraction and maintenance of belt conveyor componentry.

Units Replaced
This unit replaces the following units:
• MNC.G55.A Install, retract and maintain conveyor componentry.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT PERFORMANCE CRITERIA

1 Plan and prepare.
   1.1 Obtain, interpret and clarify/confirm work requirements before proceeding.
   1.2 Access, interpret and apply geological and survey data required to complete the allocated work.
   1.3 Access and apply safety information and procedures throughout the work.
   1.4 Obtain, transport and prepare materials and resources required for the work in accordance with the plan and relevant manufacturer or site requirements.
   1.5 Prepare the work site in accordance with site requirements.

2 Install and retract belt conveyor componentry.
   2.1 Coordinate activities with others at the site prior to commencement of, and during, the work activity.
   2.2 Establish and monitor safe work environment throughout the job.
   2.3 Isolate and connect auxiliary componentry in accordance with the manufacturer and site procedures.
   2.4 Extend/retract belt conveyor componentry in accordance with manufacturer and/or site requirements and legislative regulations.
   2.5 Inspect conveyor for line and level and test to ensure functionality, safety and compliance with specifications.
2.6 Recover conveyor equipment systematically, in accordance with site procedures and with minimal loss and damage to the recovered equipment.

2.7 Recognise and respond to hazardous and emergency situations in accordance with manufacturer instructions and site procedures.

3 Carry out conveyor maintenance.

3.1 Conduct inspection and fault finding in accordance with manufacturer recommendations and site requirements.

3.2 Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer and site procedures.

3.3 Carry out minor maintenance to manufacturer and/or site requirements and legislative requirements.

3.4 Provide operator support during preparation for and conduct of major maintenance tasks, in accordance with site requirements.

3.5 Maintain records in accordance with site requirements/agreements and legislation.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

**Work requirements** may be in the form of:
- shift briefings
- handover details
- work orders
- safe working procedures (or equivalent)
- nature and scope of the job
- hazards and work environment
- related work activities
- sequencing
- site access.

**Safety information and procedures** may be contained in:
- legislation and regulations
- relevant Australian Standards
- management plans
- OH&S policy
- codes of practice
- manufacturer instructions
- safe working procedures (or equivalent).
Safe work environment includes:
- isolation
- tagging
- restoration after isolation
- dust suppression.

Conveyor componentry may include:
- belt
- rollers
- structures
- lock-outs
- belt control equipment
- safety equipment
- hand tools.

Operator (operational) maintenance procedures are those established and authorised for the site.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to extend, retract and maintain conveyor componentry on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective extension, retraction and maintenance of conveyor componentry on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on conveyor operations
  c. completing pre-start, start-up and shut-down procedures
  d. completing essential functions including:
     e.1. preparing site and equipment
     e.2. isolating the work area
     e.3. assembling and positioning of componentry
     e.4. extending and retracting conveyors
     e.5. maintaining conveyor systems
     e.6. restoring sites.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- operational safety requirements
- mine operational procedures
• conveyor operations and componentry
• relevant conveyor assembly procedures
• relevant geological and survey information
• conveyor maintenance requirements
• site environment requirements and constraints related to conveyor work.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
• access, interpret and apply technical and safety information
• interpret and apply survey information and plans
• operate relevant plant and machinery
• communicate and coordinate activities with others
• apply diagnostic / fault finding techniques
• use relevant hand tools
• maintain equipment records
• comply with environmental requirements.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.
Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1056A  Install, commission and maintain major conveyor equipment and systems

Unit Descriptor
This unit covers the installation, commissioning and maintenance of major conveyor equipment and systems for underground and surface operations.

Units Replaced
This unit replaces the following units:
• MNC.G56.A Install, commission and maintain major conveyor equipment and systems.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT  PERFORMANCE CRITERIA
1 Plan and prepare for work.
  1.1 Obtain, interpret and clarify/confirm work requirements before proceeding.
  1.2 Access, interpret and apply geological and survey data required to complete the allocated work.
  1.3 Access and apply safety information and procedures throughout the work.
  1.4 Obtain, transport and prepare materials and resources required for the work in accordance with the plan and relevant manufacturer or site requirements.

2 Install conveyor equipment.
  2.1 Coordinate activities with others at the site prior to commencement of, and during, the work activity.
  2.2 Apply and monitor isolation procedures to establish and maintain a safe work environment throughout the job.
  2.3 Install conveyor equipment and systems in accordance with manufacturer specifications and site procedures.
  2.4 Recognise and respond to hazardous and emergency situations in accordance with manufacturer instructions and site procedures.
  2.5 Perform work in accordance with agreed plan and outcomes and within the operating capacities of the allocated equipment.

3 Commission conveyor systems.
  3.1 Carry out inspection of conveyors and belts and auxiliary componentry to ensure compliance with relevant technical specifications.
  3.2 Carry out start-up and shut-down procedures in accordance with site requirements.
3.3 Test and test run equipment to ensure compliance with manufacturer instructions and site procedures.
3.4 Return equipment to service in accordance with site procedures and practices and environmental requirements.

4 Carry out operator maintenance.

4.1 Carry out conveyor equipment inspections and fault finding in accordance with manufacturer instructions and site requirements.

4.2 Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer instructions and site procedures.

4.3 Carry out minor maintenance to manufacturer instructions and site requirements.

4.4 Provide operator support during preparation for, and conduct of, major maintenance tasks in accordance with site requirements.

4.5 Process records in accordance with site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Work requirements may be in the form of:
- shift briefings
- handover details
- work orders
- safe working procedures (or equivalent).

Work requirements may include:
- nature and scope of tasks
- sequencing
- equipment / plant allocation, including any defects
- locations and essential survey data
- working conditions
- geological data
- ventilation systems information
- hazards and potential hazards
- coordination requirements / issues.
Safety information and procedures may be contained in:

- legislation and regulations
- relevant Australian Standards
- management plans
- OH&S policy
- codes of practice
- manufacturer instructions
- safe working procedures (or equivalent).

Conveyor equipment may include:

- chain blocks
- airbags
- bolters
- borers
- drills and bits
- hand tools
- levelling equipment
- pulley blocks
- cables and chains.

Conveyors may include:

- belt
- chain
- roller link
- cable belt.

Belts may be:

- cable
- steel core
- canvas woven
- rubber
- PVC which may be:
  - clipped
  - hot spliced
  - cold spliced joined.

Auxiliary componentry may include:

- drive heads
- belt starter
- guarding items
- loop take-ups
- weight towers
- transfer points
- surge bins
- clamping stations
- mobile stacker
- magnets.
Specific safe requirements are to include:
- isolation of existing systems and services
- observance of safety tagging procedures
- restoration after isolation.

Conveyor installation may include:
- fixing on concrete slab
- dirt floor
- between floor and roof
- suspended from roof.

Lifting equipment may include:
- mobile cranes
- forklifts
- block and tackle
- jacks
- a range of rigging equipment.

Drive heads may include:
- multi-roller
- motorised pulley
- pneumatic fluid drives.

Installation may include disassembly prior to installation to allow transportation of components to assembly location.

Installation and repair may include:
- skirts
- scrapers
- snubber drums
- weighers
- tracking
- tensioning equipment
- pulley lagging.

Operator (operational) maintenance procedures are those established and authorised for the site.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to install, commission and maintain major conveyor equipment and systems on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective installation, commissioning and maintenance of major conveyor equipment and systems
on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:

a. applying personal and operational safety requirements
b. interpreting and communicating information on conveyor systems
c. preparing the site, including surveying
d. prefabricating where appropriate
e. transporting and layout of equipment and materials on site
f. assembling, positioning and installing componentry
g. inspecting and finalising adjustments
h. returning the system to service
i. restoring the site.

**Required Knowledge**

Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- operational safety procedures
- mine operational procedures related to conveyors
- mine communication procedures
- conveyor equipment characteristics, uses and limitations
- conveyor equipment installation procedures
- site mechanical / technical maintenance systems and procedures
- relevant geological and survey information
- equipment maintenance / lubrication requirements
- site environmental requirements and constraints related to conveyor systems.

**Required Skills**

Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- apply operational safety procedures
- access, interpret and apply technical and safety information
- interpret and apply survey information and plans
- operate relevant plant and machinery
- communicate and coordinate activities with others
- maintain equipment records
- apply diagnostic / fault finding techniques
- use relevant hand tools
- comply with environmental requirements.

**Assessment and Interdependence of Units**

This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**

There are no pre-requisite units for this unit.
Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNC1057A  Repair and splice conveyor belting

Unit Descriptor
This unit covers the repair and installation of conveyor belting using hot and cold vulcanising techniques.

Units Replaced
This unit replaces the following units:
- MNC.G57.A Repair and splice conveyor belting.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT PERFORMANCE CRITERIA

1 Plan and prepare for work.

1.1 Obtain, interpret and clarify/confirm work requirements before proceeding.

1.2 Access, interpret and apply geological and survey data required to complete the allocated work.

1.3 Access and apply safety information and procedures throughout the work.

1.4 Identify and obtain resources, including appropriate technical manuals and information, equipment, materials and tools required for the work.

1.5 Locate, position, make safe and clean the belting in preparation for work.

1.6 Coordinate activities with others at the site prior to commencement of, and during, the work activity.

2 Carry out splicing operations.

2.1 Select tools and equipment appropriate to the tasks and correctly use and apply throughout the task.

2.2 Complete splicing operation or belt repairs without damage to adjacent structures or equipment, in accordance with the manufacturer/site procedures.

3 Return conveyor to service.

3.1 Carry out inspection of conveyor and auxiliary equipment to ensure compliance with relevant technical specifications.

3.2 Test and test run conveyor belting to ensure
compliance with manufacturer/site procedures.

3.3 Return conveyor to service in accordance with site procedures and practices.

4 Complete the work sequence.

4.1 Clean, service and store equipment and tools in accordance with site procedures.

4.2 Restore worksite in accordance with site procedures.

4.3 Complete records and documents in accordance with manufacturer/site procedures.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Work requirements may be in the form of:
- shift briefings
- handover details
- work orders
- safe working procedures (or equivalent)
- type of belt to be repaired/spliced
- method of repair/splice
- location of work and hazards
- work environment.

Safety information and procedures may be contained in:
- legislation and regulations
- relevant Australian standards
- management plans
- OH&S policy
- codes of practice
- manufacturer instructions
- safe working procedures (or equivalent).

Equipment may include:
- cutting
- sanding
- clamping
- pulling
- lifting
- vulcanising equipment.

Tools may include:
• hand tools
• air and power tools
• pulling gear.
Belts may include:
- steel cord
- PVC
- fabric
- composite carcass.

Splices may include:
- both cold and hot vulcanising
- mechanical splices/clips/joints.

Repairs may include:
- edge repairs
- lateral and longitudinal splits
- inlays.

Lifting equipment may include:
- mobile cranes
- gantry cranes
- truck mounted hoist
- forklifts
- general rigging equipment.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to repair and splice conveyor belting on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective repair and splicing of conveyor belting on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying operational safety
  b. complying with statutory requirements
  c. interpreting and communicating information on conveyor belting
  d. isolating equipment / systems
  e. start-up / shut-down procedures
  f. observation of fire hazards
  g. making safe the vulcaniser while pressurised
  h. maintaining ventilation when using solvents
  i. inspecting and returning conveyor systems to service
  j. recording procedures.
Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- legislative and site operation safety requirements and procedures
- site operational rules and procedures
- operations, characteristics, capabilities and limitations of vulcanising presses
- specialised cutting tools and conveyor belt types
- slinging and lifting procedures and related safety requirements
- hazardous chemicals
- site equipment and maintenance documentation and procedures
- site inventory (parts) systems
- marking out procedures
- site environmental requirements and constraints related to conveyor belting.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
- access, interpret and apply technical information
- apply site safety procedures
- use hand and power tools
- use marking out techniques
- sharpen knives
- operate pulling and lifting equipment
- dispose of environmentally sensitive oils, fluids and materials.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.
All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1060A  Operate support equipment

Unit Descriptor
This unit covers the operation of commercially available cross industry equipment used to perform a wide variety of support tasks on site.

Units Replaced
This unit replaces the following units:
• MNC.G60.A Operate support equipment.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT  PERFORMANCE CRITERIA
1  Plan and prepare for operations.
   1.1 Obtain, interpret and clarify work requirements before proceeding.
   1.2 Access, interpret and apply geological and survey data required to complete the allocated work.
   1.3 Access and apply safety information and procedures throughout the work.

2  Operate support equipment.
   2.1 Coordinate activities with others at the site prior to commencement of, and during, the work activity.
   2.2 Carry out pre-start, start-up, park-up and shut-down procedures in accordance with manufacturer and/or site procedures.
   2.3 Change and operate ancillary attachments to the support equipment in accordance with manufacturer instructions and site procedures.
   2.4 Operate support equipment with or without ancillary attachments in accordance with manufacturer instructions and site procedures.
   2.5 Recognise and respond to hazardous and emergency situations in accordance with manufacturer instructions and site procedures.
   2.6 Complete work in accordance with the agreed plan and outcomes and within the operating capacity of the equipment.

3  Carry out operator
   3.1 Carry out equipment inspections and fault finding in
3.2 Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer instructions and site authorised procedures and practices.

3.3 Carry out minor maintenance to manufacturer instructions and site requirements.

3.4 Provide operator support during preparation for, and conduct of, major maintenance tasks in accordance with site requirements.

3.5 Process records in accordance with site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Work requirements may be in the form of:
- shift briefings
- handover details
- work orders
- support equipment identification/allocation
- nature and scope of the tasks
- achievement targets
- working conditions
- site lighting arrangements
- defects to equipment
- hazards and potential hazards
- coordination requirements / issues.

Safety information and procedures may be contained in:
- legislation and regulations
- relevant Australian standards
- management plans
- OH&S policy
- codes of practice
- manufacturer instructions
- safe working or job procedures (or equivalents).

Support equipment may include:
- skid steer vehicle
- tractor
- backhoe
- excavator
- small front end loader
- vibrator roller
- sheaf's foot roller
- chain saw
- telescopic handlers.

Ancillary attachments may include:
- buckets
- auger
- grass cutter
- brush cutter
- slasher
- pneumatic hammer
- shovel
- plough
- rotary hoe
- any other commercially or site produced attachment.

Operator (operational) maintenance procedures are those established and authorised for the site.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to operate support equipment on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective operation of support equipment on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying operational safety procedures
  b. interpreting and communicating operational information
  c. completing pre-start, start-up, park-up and shut-down procedures
  d. operating the support equipment for its specified purpose
  e. operating the support equipment within manufacturer instructions/constraints
  f. attaching and operating ancillary equipment
  g. applying environmental requirements
  h. operator maintenance.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
• site and equipment safety requirements
• equipment and ancillary attachment characteristics, technical capabilities and limitations
• specified support equipment operational procedures
• specified support equipment maintenance systems and procedures
• basic geological and survey data related to the specified operation
• site environmental requirements and constraints related to the support equipment.

**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

• apply operational safety requirements
• access, interpret and apply technical information
• match appropriate equipment with tasks
• maintain equipment records
• use relevant hand tools
• apply hand-eye co-ordination
• apply diagnostic techniques
• apply environmental constraints related to the specified operations
• dispose of environmentally sensitive fluids and materials.

**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Prerequisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**
To ensure consistency of performance, this unit must be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.
Methods of Assessment

Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1061A Operate light vehicle

Unit Descriptor
This unit covers the operation of light vehicles (up to 4.5 tonnes GVM) including the starting, driving and stopping and the conduct of operator checks and actions.

Units Replaced
This unit replaces the following units:
- MNC.G61.A Operate light vehicle.

Employability Skills

The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

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<thead>
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<th>PERFORMANCE CRITERIA</th>
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<td>1.1 Obtain, interpret and clarify/confirm work requirements and details before proceeding.</td>
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<tr>
<td>1.2 Access, interpret and apply geological and survey data required to complete the allocated work in accordance with site procedures.</td>
<td></td>
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<td>1.3 Access and apply safety information and procedures throughout the work.</td>
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<td>2 Operate light vehicle.</td>
<td>2.1 Resolve coordination activities with others at the site prior to commencement of, and during, the work activity.</td>
</tr>
<tr>
<td>2.2 Carry out pre-start, start-up, park-up and shut-down procedures in accordance with manufacturer and/or site procedures.</td>
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<td>2.3 Operate ancillary attachments to the light vehicle in accordance with manufacturer instructions and site procedures.</td>
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<td>2.4 Operate light vehicle with or without ancillary attachments in accordance with manufacturer instructions and site procedures.</td>
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<td>2.5 Load/unload materials to be carried, or embark/disembark personnel safely in accordance with manager's rules.</td>
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<td>2.6 Recognise and respond to hazardous and emergency situations in accordance with manufacturer instructions and site procedures.</td>
<td></td>
</tr>
<tr>
<td>2.7 Complete work in accordance with the agreed plan and outcomes and within the operating capacity of the light vehicle.</td>
<td></td>
</tr>
</tbody>
</table>
3  Carry out operator maintenance.

3.1 Carry out equipment inspections and fault finding in accordance with manufacturer instructions and site requirements.

3.2 Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer instructions and site authorised procedures and practices.

3.3 Carry out minor maintenance to manufacturer instructions and site requirements.

3.4 Process records in accordance with site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Work requirements and details may include:
- vehicle identification
- nature and scope of work
- route
- working conditions
- achievement targets
- site lighting arrangements
- equipment defects
- hazards and potential hazards
- coordination requirements/issues
- shift briefings
- handover details
- work orders.

Safety information and procedures may include:
- use of seat belts
- security of door
- conditions of brakes and braking system (air pressure)
- load characteristics
- vehicle speed
- fluid levels.

Light vehicles include those up to 4.5 tonne GVM and/or carrying up to 12 passengers, and may be single or multiple drive.

Pre-start procedures may include:
- fluid levels, including fuel, engine oil, brake fluid, coolant, clutch / transmission fluid and windscreens, washer fluid
- windows and mirrors for clear visibility
- tyres and wheels (air pressure, tyre damage, illegal tread depth and condition, abnormal wear pattern and tyre compatibility)
- fan belts
- seat belts
- door hatches and latches
- battery and connections
- visible and current registration and licences
- spare wheel
- wheel nuts
- rear guards
- warning horn.

**Start-up procedures** may include:
- lights (headlights, clearance lights, indicators, hazard lights, reversing lights)
- brakes
- heating and ventilation
- instruments and gauges
- windscreen washers and wipers
- electrical charging
- oil pressure
- coolant temperature
- exhaust temperature (if applicable)
- engine oil temperature
- gearbox oil temperature (if applicable)
- drive axle(s) oil temperature (if applicable)
- coolant level, coolant temperature and low engine oil pressure audible warning device (if applicable)
- air brake pressure
- fuel quantity
- ancillary monitors.

**Ancillary attachments** may include:
- vehicle loading cranes
- tailgate loaders
- sprayers.

**Safety requirements** may include:
- use of authorised cargo restraining equipment
- observing authorised parking areas
- correct distances between vehicles
- observing mine traffic rules
- passenger safety and control
- load security and safety
- transport rules
- operations signals procedures.

**Operator maintenance** procedures are those established and authorised for the site.
Records may include manual or electronic data collection systems and cover:
- log-on/off
- activity recording
- trip records
- refuelling information.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to operate a light vehicle on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective operation of a light vehicle on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on light vehicle operations and mine site traffic rules
  c. completing pre-start, start-up and shut-down procedures
  d. completing essential functions including:
     d.1. driving, stopping and parking
     d.2. monitoring vehicle performance
     d.3. identifying vehicle faults and damage
     d.4. reporting and recording
     d.5. completing operator maintenance.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- site and equipment safety requirements
- basic mine geological and survey data
- mine operational procedures
- equipment and trailer characteristics, technical capabilities and limitations
- light vehicle maintenance requirements/procedures
- vehicle record system
- communication system
- mine environment conditions
- loading/offloading procedures.
Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
- apply operational safety requirements
- access, interpret and apply technical information
- match appropriate equipment with tasks
- communicate effectively
- apply operator maintenance techniques and procedures
- use relevant hand tools
- apply diagnostic techniques
- maintain equipment records
- dispose of environmentally sensitive fluids and materials.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit must be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.
Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1062A  Operate medium vehicle

Unit Descriptor
This unit covers the operation of two axle medium vehicles over 4.5 tonne including the
starting, driving and stopping and the conduct of operator checks and actions.

Units Replaced
This unit replaces the following units:
• MNC.G62.A Operate medium vehicle

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Plan and prepare for operations.</td>
</tr>
<tr>
<td></td>
<td>1.1 Obtain, interpret and clarify/confirm work requirements and details in the form of shift briefings, handover details or work orders before proceeding.</td>
</tr>
<tr>
<td></td>
<td>1.2 Access, interpret and apply geological and survey data required to complete the allocated work in accordance with site procedures.</td>
</tr>
<tr>
<td></td>
<td>1.3 Access and apply safety information and procedures throughout the work.</td>
</tr>
<tr>
<td>2</td>
<td>Operate medium vehicle.</td>
</tr>
<tr>
<td></td>
<td>2.1 Resolve coordination activities with others at the site prior to commencement of, and during, the work activity.</td>
</tr>
<tr>
<td></td>
<td>2.2 Carry out pre-start, start-up, park-up and shut-down procedures in accordance with manufacturer and/or site procedures.</td>
</tr>
<tr>
<td></td>
<td>2.3 Operate ancillary attachments to the medium vehicle in accordance with manufacturer instructions and site procedures.</td>
</tr>
<tr>
<td></td>
<td>2.4 Operate medium vehicle with or without ancillary attachments in accordance with manufacturer specifications and site procedures.</td>
</tr>
<tr>
<td></td>
<td>2.5 Manage engine power to ensure efficiency of vehicle movement and to minimise damage to the engine and drive line.</td>
</tr>
<tr>
<td></td>
<td>2.6 Recognise and respond to hazardous and emergency situations in accordance with manufacturer instructions and site procedures.</td>
</tr>
<tr>
<td></td>
<td>2.7 Complete work in accordance with the agreed plan and outcomes and within the operating capacity of the medium vehicle.</td>
</tr>
</tbody>
</table>
### 3 Carry out operator maintenance.

3.1 Carry out equipment inspections and fault finding in accordance with manufacturer instructions and site requirements.

3.2 Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer instructions and site authorised procedures and practices.

3.3 Carry out minor maintenance to manufacturer instructions and site requirements.

3.4 Provide operator support during preparation for, and conduct of, major maintenance tasks in accordance with site requirements.

3.5 Process records in accordance with site requirements.

### RANGE STATEMENT

The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

**Work requirements and details** may include:
- medium vehicle identification/allocation
- nature and scope of work
- route
- working conditions
- achievement targets
- site lighting arrangements
- equipment defects
- hazards and potential hazards
- coordination requirements/issues
- shift briefings
- handover details
- work orders.

**Safety information and procedures** may include:
- use of seat belts
- security of door
- conditions of brakes and braking system (air pressure)
- load characteristics
- vehicle speed
- fluid levels
- safety requirements, including:
  - use of authorised cargo restraining equipment
  - observing authorised parking areas
  - correct distances between vehicles
- observing mine traffic rules
- passenger safety and control
- load security and safety
- transport rules
- operations signals procedures

**Pre-start procedures** may include:

- fluid levels including fuel, engine oil, brake fluid, coolant, clutch / transmission fluid and windscreen, washer fluid
- windows and mirrors for clear visibility
- tyres and wheels (air pressure, tyre damage, illegal tread depth and condition, abnormal wear pattern and tyre compatibility)
- fan belts
- seat belts
- door hatches and latches
- battery and connections
- visible and current registration and licences
- spare wheel
- wheel nuts
- rear guards
- warning horn

**Start-up procedures** may include:

- mediums (head mediums, clearance mediums, indicators, hazard mediums, reversing mediums)
- brakes
- heating and ventilation
- instruments and gauges
- windscreen washers and wipers

**Manufacturer specifications** may include:

- engine crank/start
- idling
- engine rpm
- operating temperatures
- torque range

**Engine power** may be managed by:

- selecting gear ratio to achieve smooth take-off
- changing gears to maintain specified torque range at all speeds
- utilising engine retarder

**Operator maintenance** procedures are those established and authorised for the site
**Records** may include manual or electronic data collection systems and cover:
- log-on/off
- activity recording
- trip records
- refuelling information

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to operate a medium vehicle appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective operation of a medium vehicle appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating operational information on medium vehicle
  c. operations and mine site traffic rules
  d. completing pre-start, start-up, park-up and shut-down procedures
  e. operating the medium vehicle for its specified purpose
  f. operating the medium vehicle within manufacturer instructions/constraints
  g. carrying out operator maintenance.

**Required Knowledge**
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- site and equipment safety requirements
- medium vehicle operational procedures
- basic mine geological and survey data
- mine operational procedures
- equipment and trailer characteristics, technical capabilities and limitations
- medium vehicle maintenance requirements/procedures
- vehicle record systems
- communication systems
- mine environmental conditions.

**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
- apply operational safety requirements
- access, interpret and apply technical information
- match appropriate equipment with tasks
- maintain equipment records
- use relevant hand tools
- apply diagnostic techniques
- communicate effectively
- apply environmental constraints relate to specified operations
- dispose of environmentally sensitive fluids and materials.

**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**
To ensure consistency of performance, this unit must be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1063A Operate heavy rigid vehicle

Unit Descriptor
This unit covers the operation of heavy rigid vehicles (with more than 2 axles) including the starting, driving and stopping and the conduct of operator checks and actions.

Units Replaced
This unit replaces the following units:
- MNC.G63.A Operate heavy rigid vehicle

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

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</tr>
<tr>
<td></td>
<td>1.2 Access, interpret and apply geological and survey data required to complete the allocated work in accordance with site procedures.</td>
</tr>
<tr>
<td></td>
<td>1.3 Access and apply safety information and procedures throughout the work.</td>
</tr>
<tr>
<td>2. Operate heavy rigid vehicle.</td>
<td>2.1 Resolve coordination activities with others at the site prior to commencement of, and during, the work activity.</td>
</tr>
<tr>
<td></td>
<td>2.2 Carry out pre-start, start-up, park-up and shut-down procedures in accordance with manufacturer and/or site procedures.</td>
</tr>
<tr>
<td></td>
<td>2.3 Operate ancillary attachments to the heavy rigid vehicle in accordance with manufacturer instructions and site procedures.</td>
</tr>
<tr>
<td></td>
<td>2.4 Operate heavy rigid vehicle with or without ancillary attachments in accordance with manufacturer specifications and site procedures.</td>
</tr>
<tr>
<td></td>
<td>2.5 Manage engine power to ensure efficiency of vehicle movement and to minimise damage to the engine and drive line.</td>
</tr>
<tr>
<td></td>
<td>2.6 Recognise and respond to hazardous and emergency situations in accordance with manufacturer instructions and site procedures.</td>
</tr>
<tr>
<td></td>
<td>2.7 Complete work in accordance with the agreed plan and outcomes and within the operating capacity of the heavy rigid vehicle.</td>
</tr>
</tbody>
</table>
3. Carry out *operator maintenance*.

3.1 Carry out equipment inspections and fault finding in accordance with manufacturer instructions and site requirements.

3.2 Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer instructions and site authorised procedures and practices.

3.3 Carry out minor maintenance to manufacturer instructions and site requirements.

3.4 Provide operator support during preparation for, and conduct of, major maintenance tasks in accordance with site requirements.

3.5 Process *records* in accordance with site requirements.

**RANGE STATEMENT**

The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

*Work requirements and details* may include:
- heavy rigid vehicle identification/allocation
- nature and scope of work
- route
- working conditions
- achievement targets
- site lighting arrangements
- equipment defects
- hazards and potential hazards
- coordination requirements/issues
- shift briefings
- handover details
- work orders

*Safety information and procedures* may include:
- use of seat belts
- security of door
- conditions of brakes and braking system (air pressure)
- load characteristics
- vehicle speed
- fluid levels
- safety requirements, including:
  - use of authorised cargo restraining equipment
  - observing authorised parking areas
  - correct distances between vehicles
  - observing mine traffic rules
- passenger safety and control
- load security and safety
- transport rules
- operations signals procedures

**Pre-start procedures** may include:
- fluid levels, including fuel, engine oil, brake fluid, coolant, clutch / transmission fluid and windsreen, washer fluid
- windows and mirrors for clear visibility
- tyres and wheels (air pressure, tyre damage, illegal tread depth and condition, abnormal wear pattern and tyre compatibility)
- fan belts
- seat belts
- door hatches and latches
- battery and connections
- visible and current registration and licences
- spare wheel
- wheel nuts
- rear guards
- warning horn.

**Start-up procedures** may include:
- heavy rigids (head heavy mediums, clearance heavy rigids, indicators, hazard heavy rigids, reversing heavy rigids)
- brakes
- heating and ventilation
- instruments and gauges
- windscreen washers and wipers.

**Manufacturer specifications** may include:
- engine crank/start
- idling
- engine rpm
- operating temperatures
- torque range.

**Engine power** may be managed by:
- selecting gear ratio to achieve smooth take-off
- changing gears to maintain specified torque range at all speeds
- utilising engine retarder.

**Operator maintenance** procedures are those established and authorised for the site.

**Records** may include manual or electronic data collection systems and cover:
- log-on/off
- activity recording
- trip records
- refuelling information.
EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to operate a heavy rigid vehicle appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective operation of a heavy rigid vehicle appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating operational information on heavy rigid vehicle operations and mine site traffic rules
  c. completing pre-start, start-up, park-up and shut-down procedures
  d. operating the heavy rigid vehicle for its specified purpose
  e. operating the heavy rigid vehicle within manufacturer instructions/constraints
  f. applying environmental requirements
  g. carrying out operator maintenance.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- site and equipment safety requirements
- heavy rigid vehicle operational procedures
- basic mine geological and survey data
- mine operational procedures
- equipment characteristics, technical capabilities and limitations
- heavy rigid vehicle maintenance requirements/procedures
- vehicle record systems
- communication systems
- mine environmental conditions.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- apply operational safety requirements
- access, interpret and apply technical information
- match appropriate equipment with tasks
- maintain equipment records
- use relevant hand tools
- apply diagnostic techniques
- communicate effectively
- apply environmental constraints relate to specified operations
- dispose of environmentally sensitive fluids and materials.
**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**
To ensure consistency of performance, this unit must be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNC04 Coal Training Package to be reviewed by 31 May 2007 - Version 2

MNCG1064A Operate articulated vehicle

Unit Descriptor
This unit covers the operation of medium/articulated vehicles towing trailers and semi trailers above 4.5 tonne GVM including the starting, driving and stopping and the conduct of operator checks and actions.

Units Replaced
This unit replaces the following units:
- MNC.G64.A Operate articulated vehicle

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT PERFORMANCE CRITERIA

1. Plan and prepare for operations.

1.1 Obtain, interpret and clarify/confirm work requirements and details in the form of shift briefings, handover details or work orders before proceeding.

1.2 Access, interpret and apply geological and survey data required to complete the allocated work in accordance with site procedures.

1.3 Access and apply safety information and procedures throughout the work.

2. Operate articulated vehicle.

2.1 Resolve coordination activities with others at the site prior to commencement of, and during, the work activity.

2.2 Carry out pre-start, start-up, park-up and shut-down procedures in accordance with manufacturer and/or site procedures.

2.3 Operate ancillary attachments to the articulated vehicle in accordance with manufacturer instructions and site procedures.

2.4 Operate articulated vehicle with or without ancillary attachments in accordance with manufacturer specifications and site procedures.

2.5 Manage engine power to ensure efficiency of vehicle movement and to minimise damage to the engine and drive line.

2.6 Recognise and respond to hazardous and emergency situations in accordance with manufacturer instructions and site procedures.

2.7 Complete work in accordance with the agreed plan and outcomes and within the operating capacity of the
articulated vehicle.
3 Couple and uncouple trailers.

3.1. Couple or uncouple and check prime mover and trailer in accordance with manufacturer and site instructions and procedures.

4 Carry out operator maintenance

4.1. Carry out equipment inspections and fault finding in accordance with manufacturer instructions and site requirements.

4.2. Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer instructions and site authorised procedures and practices.

4.3. Carry out minor maintenance to manufacturer instructions and site requirements.

4.4. Provide operator support during preparation for, and conduct of, major maintenance tasks in accordance with site requirements.

4.5. Process records in accordance with site requirements.

RANGE STATEMENT

The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Work requirements and details may include:

- articulated vehicle identification/allocation
- nature and scope of work
- route
- working conditions
- achievement targets
- site lighting arrangements
- equipment defects
- hazards and potential hazards
- coordination requirements/issues
- shift briefings
- handover details
- work orders.

Safety information and procedures may include:

- use of seat belts
- security of door
- conditions of brakes and braking system (air pressure)
- load characteristics
- vehicle speed
- fluid levels
• safety requirements, including:
  - use of authorised cargo restraining equipment
  - observing authorised parking areas
  - correct distances between vehicles
  - observing mine traffic rules
  - passenger safety and control
  - load security and safety
  - transport rules
  - operations signals procedures.

Pre-start procedures may include:
• fluid levels, including fuel, engine oil, brake fluid, coolant, clutch / transmission fluid and windscreen, washer fluid
• windows and mirrors for clear visibility
• tyres and wheels (air pressure, tyre damage, illegal tread depth and condition, abnormal wear pattern and tyre compatibility)
• fan belts
• seat belts
• door hatches and latches
• battery and connections
• visible and current registration and licences
• spare wheel
• wheel nuts
• rear guards
• warning horn.

Start-up procedures may include:
• articulated s (head heavy mediums, clearance articulated s, indicators, hazard articulated s, reversing articulated s)
• brakes
• heating and ventilation
• instruments and gauges
• windscreen washers and wipers.

Manufacturer specifications may include:
• engine crank/start
• idling
• engine rpm
• operating temperatures
• torque range.

Engine power may be managed by:
• selecting gear ratio to achieve smooth take-off
• changing gears to maintain specified torque range at all speeds
• utilising engine retarder.
**Trailer coupling, uncoupling procedures** may include:
- selection of an appropriately firm and level parking area
- applying parking brakes
- ensuring turn-table jaw release is locked/unlocked
- turn-table lock and trailer wheel chocks
- compatibility of turn-table and trailer ring pin
- alignment of prime-mover, turn-table and trailer skid-pad
- connecting brake service, emergency lines, auxiliary air and electrical lines
- inspecting and testing air brakes, trailer brakes, lock status of turn-table jaw release
- securing and testing trailer landing legs.

**Operator maintenance** procedures are those established and authorised for the site.

**Records** may include manual or electronic data collection systems and cover:
- log-on/off
- activity recording
- trip records
- refuelling information.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to operate an articulated vehicle appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective operation of an articulated vehicle appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating operational information on articulated vehicle operations and mine site traffic rules
  c. completing pre-start, start-up, park-up and shut-down procedures
  d. operating the articulated vehicle for its specified purpose
  e. operating the articulated vehicle within manufacturer instructions/constraints
  f. coupling/uncoupling trailers
  g. applying environmental requirements
  h. carrying out operator maintenance

**Required Knowledge**
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- site and equipment safety requirements
- articulated vehicle operational procedures
• basic mine geological and survey data
• mine operational procedures
• equipment and trailer characteristics, technical capabilities and limitations
• articulated vehicle maintenance requirements/procedures
• vehicle record systems
• communication systems
• site environmental requirements and constraints related to the articulated vehicle.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
• apply operational safety requirements
• access, interpret and apply technical information
• match appropriate equipment with tasks
• maintain equipment records
• use relevant hand tools
• apply diagnostic techniques
• communicate effectively
• apply environmental constraints relate to specified operations
• dispose of environmentally sensitive fluids and materials.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit must be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons. Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1065A Operate multi-combination vehicles on mine sites

Unit Descriptor
This unit covers the operation of multi-combination vehicles such as B-double vehicles and road trains, including pre-start inspections and checks; starting, driving and stopping; loading and unloading.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Prepare for operations.</td>
<td>1.1 Obtain, interpret and clarify/confirm work requirements in the form of shift briefings, handover details or work orders before proceeding with operation.</td>
</tr>
<tr>
<td></td>
<td>1.2 Assess and apply safety information and procedures throughout the operations.</td>
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<td></td>
<td>1.3 Prepare vehicle records and carry out log-on procedures to site requirements.</td>
</tr>
<tr>
<td>2 Couple and uncouple trailers.</td>
<td>2.1 Couple or uncouple and check prime mover and trailer in accordance with manufacturer and site instructions and procedures.</td>
</tr>
<tr>
<td>3 Conduct vehicle checks.</td>
<td>3.1 Conduct pre-start checks on vehicle, trailers and ancillary equipment in accordance with manufacturer and site requirements.</td>
</tr>
<tr>
<td></td>
<td>3.2 Test vehicle and trailer operations in accordance with manufacturer and site procedures, and report faults which affect the safety of the operation to the appropriate authority.</td>
</tr>
<tr>
<td></td>
<td>3.3 Start engine in accordance with manufacturer guidelines and start-up procedures, and check systems against operational criteria.</td>
</tr>
<tr>
<td>4 Supervise loading and unloading of goods and materials.</td>
<td>4.1 Identify and take into account load characteristics when determining appropriate loading and unloading procedures.</td>
</tr>
<tr>
<td></td>
<td>4.2 Segregate dangerous or hazardous goods.</td>
</tr>
<tr>
<td></td>
<td>4.3 Ensure that goods/materials are loaded in accordance with relevant mass and loading regulations and workplace procedures.</td>
</tr>
</tbody>
</table>
4.4 Select and supervise the use of lifting aids and appliances used to aid loading procedures in compliance with workplace procedures and safety legislation.
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
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<tbody>
<tr>
<td>4.5</td>
<td>Conduct unloading activities in a safe and efficient manner taking into account suitable locations, stowage, safe use of equipment and the balance of remaining load.</td>
</tr>
<tr>
<td>4.6</td>
<td>Identify goods requiring special handling and/or documentation and follow appropriate procedures.</td>
</tr>
<tr>
<td>5</td>
<td>Steer, manoeuvre and position vehicle.</td>
</tr>
<tr>
<td>5.1</td>
<td>Steer, manoeuvre and position vehicle in accordance with traffic regulations and mine manager’s rules.</td>
</tr>
<tr>
<td>5.2</td>
<td>Ensure vehicle movements are within limits of vehicle and road dimensions and in line with manufacturer specifications.</td>
</tr>
<tr>
<td>5.3</td>
<td>Confine centrifugal forces to load configuration and driving environment.</td>
</tr>
<tr>
<td>5.4</td>
<td>Perform smooth and controlled movements.</td>
</tr>
<tr>
<td>5.5</td>
<td>Avoid contact with obstacles.</td>
</tr>
<tr>
<td>5.6</td>
<td>Carry out movements ensuring no injury to personnel or damage to property, equipment or facilities, and load.</td>
</tr>
<tr>
<td>5.7</td>
<td>Utilise available road area to increase radius of turn and swept path.</td>
</tr>
<tr>
<td>6</td>
<td>Manage engine power.</td>
</tr>
<tr>
<td>6.1</td>
<td>Manage <em>engine power</em> to ensure efficiency of vehicle movement and to minimise damage to the engine and drive line.</td>
</tr>
<tr>
<td>6.2</td>
<td>Operate vehicle within <em>manufacturer specified torque range</em> and temperature.</td>
</tr>
<tr>
<td>6.3</td>
<td>Coordinate <em>engine power</em> with gear selection to maintain torque range.</td>
</tr>
<tr>
<td>6.4</td>
<td>Effect smooth transition in gear changes necessary to maintain engine power and torque range.</td>
</tr>
<tr>
<td>7</td>
<td>Monitor and anticipate traffic and road conditions.</td>
</tr>
<tr>
<td>7.1</td>
<td>Constantly monitor and anticipate traffic and road condition to allow a <em>safe operation</em> and ensure no injury to people or damage to property, equipment, loads and facilities.</td>
</tr>
<tr>
<td>7.2</td>
<td>Achieve vehicle speed and safety using the accelerator, gears, brakes and speed retarding devices.</td>
</tr>
<tr>
<td>7.3</td>
<td>Anticipate traffic flows to ensure the most efficient route of travel is taken to destinations without</td>
</tr>
</tbody>
</table>
backtracking.

7.4 Take account of road and traffic conditions, road standards, distance and load.

8  Monitor vehicle efficiency.

8.1 Constantly monitor the vehicle's performance to ensure maximum efficiency of operation and fuel consumption.

8.2 Take account of warning devices that indicate engine or vehicle performance is hindered.

8.3 Constantly monitor vehicle for any malfunctions or factors which may affect vehicle performance.

8.4 Report any faults or damage to vehicle to the appropriate authority.

9  Park and secure the vehicle.

9.1 Bring vehicle to a halt through the use of brakes using straight line braking techniques.

9.2 Park and lock/secure vehicle in accordance with manufacturer specifications, site procedures and legal requirements.

9.3 Park vehicle in an area that is safe and legal in line with traffic regulations.

10 Carry out post-operational activities.

10.1 Carry out engine shut-down in accordance with approved procedures.

10.2 Complete post-operational checks in accordance with approved procedures and faults.

10.3 Maintain/update vehicle records and process information in accordance with site requirements.

RANGE STATEMENT

The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Vehicle records may include:

- manual or electronic data collection systems
- log-on / off, activity recording
- trip records
- refuelling information.
Pre-start checks may include:

- fluid levels, including fuel, engine oil, brake fluids, coolant, clutch/transmission fluid and windscren washer fluid.
- windows and mirrors for clear visibility
- tyres and wheels (air pressure, tyre damage, illegal tread depth and condition, abnormal wear pattern and tyre compatibility)
- fan belts
- seat belts
- door hatches and latches
- battery and connections
- visible and current registration and licences
- spare wheel
- wheel nuts
- wheel chocks and wedges
- rear guards
- warning horn
- trailer king pin
- ancillary drive belt(s)
- turn-table
- pneumatic system including draining as required
- skid plate block.

Loads to be shifted may include:

- bulk materials
- plant and equipment
- irregularly shaped
- packaged or unpackaged
- labelled or unlabelled
- palleted or unpalleted.

Workplace procedures may include:

- company procedures
- enterprise procedures
- organisational procedures
- established procedures.

Start-up procedures may include:

- lights (headlights, clearance lights, indicators, hazard lights, reversing lights)
- brakes
- heating and ventilation
- instruments and gauges
- windscren washers and wipers
- pneumatic system including hydraulic hoses and hose connections.
Trailer coupling, uncoupling procedures may include:
- selection of an appropriately firm and level parking area
- applying parking brakes
- ensuring turn-table jaw release is locked/unlocked
- turn-table lock and trailer wheel chocks
- compatibility of turn-table and trailer ring pin
- alignment of prime-mover, turn-table and trailer skid-pad
- connecting brake service, emergency lines, auxiliary air and electrical lines
- inspecting and testing of air brakes, trailer brakes, lock status of turn-table jaw release
- securing and testing trailer landing legs.

Engine power may be managed by:
- selecting gear ratio to achieve smooth take-off
- changing gears to maintain specified torque range at all speeds
- utilising engine retarder.

Manufacturer specifications may include:
- engine crank
- idling
- engine RPM
- operating temperatures
- torque range.

Faults that may affect the safety and efficiency of the operation include:
- excessive wear on King Pins
- loose/leaking air brake and hose fitting
- excessive wear in suspension system.

Road and traffic conditions to be taken account of include:
- effects of weather conditions on road
- road surface
- road gradient
- degree of visibility
- speed limits
- approved routes
- legal parking areas
- parking distances
- traffic pattern and density.

Warning devices may include:
- audible reversing buzzer
- warning lights
- speedometer
- tachometer
- oil pressure
- air pressure
- temperature gauges/warning lights
- brake warning light
- fuel quantity
- electrical charging
- ancillary systems indicators, eg high beam, turn signals, parking brake.

**Engine malfunctions** may include:
- overheating
  - coolant
  - exhaust
  - drive-line
- low oil temperature
- electrical discharge/overcharge
- low air pressure
- ancillary systems
- abnormal emissions.

**Safety information and procedures** may need to include:
- vehicle height
- condition of brakes and braking system (air pressure)
- load characteristics
- vehicle speed
- prime mover/trailer load weight ratio
- use of authorised cargo restraining equipment
- fluid levels.

**Site requirements** include:
- observing mine traffic rules
- observing authorised parking areas
- correct distances between vehicles.

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**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of all procedures, requirements and instructions to carry out multi-combination vehicle operations on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective operation of multi-combination vehicles on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. current state/territory OHS legislation, standards and codes of practice;
  c. interpreting and communicating information on multi-combination vehicle operations
d. completing essential functions including:
e. coupling and uncoupling trailers
   e.1. safely loading and unloading goods and materials
   e.2. segregating dangerous goods
   e.3. steering, manoeuvring and positioning multi-combination vehicles
   e.4. monitoring and anticipating road and traffic conditions
   e.5. maintaining vehicle records.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- site requirements related to multi-combination vehicle operations
- occupational health and safety requirements related to multi-combination vehicle operations
- methods of securing loads
- procedures for loading and unloading goods/materials
- risks and precautions when loading and unloading goods/materials
- vehicle road codes and regulations
- site transport operations
- operations, characteristics and limitations of multi-combination vehicles, trailers and ancillary equipment
- pre-start, start-up and shut down procedures
- operator level mechanical principles
- site vehicle related records and documentation system.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- apply relevant occupational health and safety requirements
- operate within relevant statutory requirements
- access, read and interpret technical information, including manufacturer manuals related to multi-combination vehicles/trailers, and their operations
- carry out pre-start, start-up and shut-down procedures on multi-combination vehicles and trailers
- operate vehicles within specifications and limitations
- steer, manoeuvre and position vehicles and trailers
- couple and uncouple trailers
- carry out reverse parking
- park and secure vehicle and trailer
- identify and report faults in vehicles and ancillary equipment
- check load configuration and security
- change wheels
- complete appropriate vehicle records and documentation.
Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1068A Test operational functions of mine vehicles and equipment

Unit Descriptor
This unit covers the testing of vehicles and equipment to prove the functionality of operating systems.

Units Replaced
This unit replaces the following units:
- MNC.G69.A Test operational function of production vehicles and equipment
- MNC.G70.A Test operational function of support vehicles and ancillary equipment.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
</table>
| 1 Plan and prepare for testing. | 1.1 Obtain, interpret and clarify work requirements before proceeding.  
1.2 Access, interpret and apply geological and survey data required to complete the allocated work.  
1.3 Identify and confirm testing requirements.  
1.4 Identify and obtain resources required for the work.  
1.5 Prepare vehicle to be worked on for the test.  
1.6 Coordinate activities with others at the site prior to commencement of, and during, the work activity.  
1.7 Access and apply safety information and procedures. |
| 2 Test vehicles and equipment. | 2.1 Carry out pre-start, start-up, shut-down and isolation procedures in accordance with manufacturer/site requirements.  
2.2 Test operational functions of the vehicle in accordance with manufacturer/site requirements.  
2.3 Move/relocate vehicle for testing purposes.  
2.4 Identify and rectify faults where possible, or arrange for corrective action in accordance with site procedures.  
2.5 Act on or report monitoring systems warnings and alarms in accordance with manufacturer instructions and site requirements.  
2.6 Recognise and respond to hazardous and emergency situations in accordance with manufacturer instructions and site procedures. |
3 Complete the testing sequence.

3.1 Clean, maintain and store *equipment* and tools in accordance with site procedures.

3.2 Restore worksite in accordance with site procedures.
3.3 Complete records and documents in accordance with manufacturer/site procedures.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Testing requirements may be identified through:
• work orders or requests
• condition statements
• maintenance schedules
• initial diagnosis
• manufacturer specifications.

Resources may include, but are not limited to:
• appropriate technical manuals
• information materials
• tools.

Preparing vehicles may include, but is not limited to:
• locating
• positioning
• isolating
• cleaning
• checking for and removing hazardous materials/explosives.

Vehicles may include all machines involved in production/support roles at the mine site.

Safety information and procedures may be contained in:
• legislation and regulations
• relevant Australian Standards
• management plans
• OH&S policy
• codes of practice
• manufacturer instructions
• safe working procedures (or equivalents).

Testing operational functions may include, but is not limited to:
• steering
• brakes
• lights
• exhaust emissions
• pneumatics
• hydraulics
• raw gas sampling
- production functionality in production mode
- movement
- warning devices
- gas monitoring devices.

**Equipment** may include, but is not limited to:
- gas sampling equipment
- hydraulic and pneumatic testing equipment.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to test the operational functions of vehicles and equipment on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective testing of functions and operation of vehicles and equipment on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on testing operations
  c. completing pre-start, start-up and shut-down procedures
  d. operating vehicles and equipment
  e. completing the testing functions
  f. maintaining records and documents.

**Required Knowledge**
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- relevant Occupational Health and Safety requirements
- mine operational rules and procedures
- operations, characteristics, capabilities and limitations of mine vehicles and equipment
- diagnosis and fault finding techniques
- site equipment and maintenance documentation and procedures
- site inventory (parts) systems
- testing procedures.

**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
- access, interpret and apply technical information and drawings
- apply site safety procedures
- use hand and power tools
- carry out precision measurement
• access and use site inventory system
• identify and diagnose faults
• operate vehicles/equipment for test purposes
• interpret test results.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair, flexible and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
• observation of processes and procedures
• oral and/or written questioning on required knowledge and skills
• testimony from supervisors, colleagues, clients and/or other appropriate persons
• inspection of the final product or outcome
• a portfolio of documentary evidence
• simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNC1069A  Conduct conveyor-car high wall mining operations

Unit Descriptor
This unit covers the operator’s functions for conveyor-car high wall mining operations including the moving of a launch, the mining of coal, the retraction and re-entry of the drive and the conduct of operator maintenance.

Units Replaced
This unit replaces the following units:
- MNC.O34.A Conduct conveyor-car high wall mining operations.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT  PERFORMANCE CRITERIA
1 Plan and prepare for operations.
   1.1 Obtain, interpret and clarify / confirm work requirements before proceeding.
   1.2 Access, interpret and apply geological and survey data required to complete the allocated work in accordance with site procedures.
   1.3 Identify and obtain / schedule resources required for operations to support the mining sequence.
   1.4 Access and apply safety information and procedures throughout the work.

2 Position the launch.
   2.1 Co-ordinate activities related to the positioning of the launch with others at the site prior to commencement of, and during, the work activity.
   2.2 Carry out pre-start, start-up and shut-down procedures in accordance with manufacturer instructions and site procedures.
   2.3 Position the launch correctly in accordance with manufacturer instructions and site procedures/plans.
   2.4 Act on or report monitoring systems and alarms in accordance with manufacturer instructions and site procedures.
   2.5 Recognise and respond hazardous conditions in accordance with manufacturer instructions and site procedures.

3 Mine coal.
   3.1 Co-ordinate activities related to the mining of coal with others at the site prior to commencement of, and during, the work activity.
   3.2 Complete function tests on the miner and belts in
accordance with manufacturer instructions and site procedures.

3.3 Conduct and control mining procedures in accordance with manufacturer instructions and site procedures.

3.4 Maintain supply of coal to the stacker in accordance with manufacturer instructions and site procedures.

3.5 Act on or report monitoring systems and alarms in accordance with manufacturer instructions and site procedures.

3.6 Recognise and respond to hazardous and emergency situations in accordance with manufacturer instructions and site procedures.

3.7 Complete work in accordance with the agreed plan and outcomes and within the operating capacities of the allocated equipment.

4 Carry Out operator maintenance.

4.1 Carry out equipment inspections and fault finding in accordance with manufacturer instructions and site requirements.

4.2 Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer instructions and site authorised procedures and practices.

4.3 Carry out minor maintenance to manufacturer instructions and site requirements.

4.4 Provide operator support during preparation for, and conduct of, major maintenance tasks in accordance with site requirements.

4.5 Process records in accordance with site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Work requirements may be in the form of:

- shift briefings
- handover details
- work orders.

Work requirements may include:

- equipment/plant identification/allocation
- nature and scope of the work
- working conditions
• achievement targets
• site lighting arrangements
• defects of machine
• hazards and potential hazards.

**Geological and survey data** may include:
• go/no-go zones
• high-wall stability
• drive position
• gas conditions
• seam pitch
• seam conditions
• other operational and safety related issues.

**Resources** may include:
• correct lighting
• loaders
• dozers
• cameras
• water supply
• fuel supply
• inertisation or flushing equipment
• lubricants
• power supply
• consumable parts.

**Safety information and procedures** may be contained in:
• legislation and regulations
• relevant Australian Standards
• management plans
• manager’s rules
• mining plans
• OH&S policy
• codes of practice
• manufacturer instructions
• safe working or job procedures (or equivalent).

**Monitoring systems and alarms** are those which indicate vital signs and out of specification activities/operations.

**Function tests** may include:
• chain conveyor
• cutter-heads
• traction
• shear-up/down
• camera sprays
• pan up/down
• water sprays
• steering wings
• stab-jack
• belt tracking
• propulsion.

**Conveyor-car high wall mining** system may be powered by electric (overhydraulic systems) and include:
• launch vehicle
• stacker
• continuous miner
• conveyor cars.

**Specific safety requirements** are to include:
• boarding and disembarking procedures
• relocation procedures
• shift blasting schedules
• advance and retraction procedures
• operational signal procedures.

**Coordination** and monitoring requirements in relation to the positioning of the launch may include:
• pit preparation
• survey controls
• stacker positioning.

**Coordination** requirements related to the mining coal may involve the functions of pinman/deckman and the loader driver.

**Operator controls** may include:
• TV/computer monitors
• navigation screen
• miner controls
• conveyor controls
• hydraulic pump controls
• fault monitoring
• gas monitoring
• supervisory control and data acquisition
• communication.

Supply **stacker** adjustments may include:
• levelling and re-aligning of stacker
• bridge conveyor.

Mining **monitoring and response** requirements may include:
• headings
• pitch
• roll
• spalling
- guttering
- roof conditions
- water (in-rush)
- floor conditions
- coal flow
- gaseous situations.

Work area **monitoring and response** requirements may include:
- high wall stability
- low wall stability
- lighting
- associated / close proximity machinery
- equipment and personnel
- impact of weather conditions.

**Responses to gaseous situations** may include:
- inertisation
- flushing
- ceasing mining
- interpretation of Coward’s triangle
- extraction
- retraction
- methane monitoring.

**Hazards** may include:
- wet weather
- gas
- fire
- explosions
- highwall collapse
- falling material.

**Emergency response** requirements to unscheduled power outrage may include:
- auxiliary power supply
- haulage jewellery
- retrieval gear (sheave blocks).

**Emergency response** requirements to roof fall may include:
- retrieval gear
- jewellery
- increased hydraulic pressure to rams.

**Operator (operational) maintenance** procedures are those established and authorised for the site.
EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to conduct conveyor-car high wall mining operations on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective conduct of conveyor-car high wall mining operations on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on conveyor-car high wall mining operations
  c. completing pre-start, start-up, function testing and shut-down procedures
  d. completing essential functions, including:
     d.1. positioning launch
     d.2. starting a drive
     d.3. maintaining drive heading
     d.4. retracting and re-entering
     d.5. recutting the floor
     d.6. completing operator maintenance.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- site and equipment safety procedures
- site mining systems and procedures
- conveyor-car high wall mining equipment characteristics, technical capabilities and limitations
- conveyor-car high wall mining maintenance systems and procedures
- site geological and survey data
- mining conditions and related methods / techniques
- mine gases and their properties / impacts
- gas monitoring systems, processes and responses
- site system monitoring capabilities and uses
- cable management procedures
- hazard identification and response procedures, including retraction, evacuation and fire
- site environmental requirements and constraints related to conveyor-car high wall mining operations.
Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- apply operational safety requirements
- access, interpret and apply technical information
- apply hand-eye coordination
- work wearing noise protection equipment
- apply diagnostic techniques
- use relevant hand tools
- maintain equipment records
- dispose of environmentally sensitive fluids and materials
- apply chemical and fuel safety measures

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.
Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1070A  Provide deck support for conveyor-car high wall mining operations

Unit Descriptor
This unit covers the functions for loading/unloading, operation and maintenance of conveyor-cars and operation of pendant controls during high-wall mining operations.

Units Replaced
This unit replaces the following units:
- MNC.O35.A Provide deck support for conveyor-car high wall mining operations

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT | PERFORMANCE CRITERIA
--- | ---
1 Plan and prepare for operations. | 1.1 Obtain, interpret and clarify/confirm work requirements before proceeding.
 | 1.2 Access, interpret and apply geological and survey data required to complete the allocated work.
 | 1.3 Carry out pre-start procedures in accordance with manufacturer instructions and site requirements.
 | 1.4 Access and apply safety information and procedures throughout the work.
 | 1.5 Recognise and respond to emergency and/or hazardous conditions throughout the work sequences in accordance with manufacturer instructions and site procedures.

2 Load and unload cars. | 2.1 Co-ordinate activities related to the loading and unloading of cars with others at the site prior to commencement of, and during, the work activity.
 | 2.2 Carry out the staging and positioning of cars correctly in accordance with manufacturer instructions and site procedures/plans.
 | 2.3 Carry out cable connections correctly in accordance with manufacturer instructions and site procedures.

3 Operate cars. | 3.1 Co-ordinate activities related to the operation of cars with others at the site prior to commencement of, and during, the work activity.
 | 3.2 Carry out start-up, sequencing and shut-down procedures in accordance with manufacturer instructions and site procedures.
 | 3.3 Remove surface dust from cars in accordance with site procedures and facilities.
3.4 Monitor cars and belt tracking to identify faults and to maintain coal flow.

3.5 Pin and unpin cars in accordance with mining procedures and plans.

3.6 Complete work in accordance with the agreed plan and outcomes and within the operating capacities of the allocated equipment.

4 Carry out operator maintenance.

4.1 Carry out equipment inspections and fault finding in accordance with manufacturer instructions and site requirements.

4.2 Carry out routine operational servicing, lubrication and housekeeping tasks in accordance with manufacturer instructions and site authorised procedures and practices.

4.3 Carry out minor maintenance to manufacturer instructions and site requirements.

4.4 Provide operator support during preparation for, and conduct of, major maintenance tasks in accordance with site requirements.

4.5 Process records in accordance with site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Work requirements may be in the form of:
- shift briefings
- handover details, and/or
- work orders.

Work requirements may include:
- equipment / plant identification / allocation
- nature and scope of the work
- working conditions
- achievement targets
- site lighting arrangements
- defects on machine
- hazards and potential hazards.

Geological and survey data may include:
- go / no-go zones
- high-wall stability
- gas conditions
- other operational and safety related issues.

**Safety information and procedures** may be contained in:
- legislation and regulations
- relevant Australian Standards
- management plans
- manager’s rules
- mining plans
- OH&S policy
- codes of practice

**manufacturer instructions**
- safe working or job procedures (or equivalents).

**Staging and positioning** may include:
- method of staging
- angle of launch
- impact of weather
- staging devices
- lanyard systems.

**Cable connection** procedures are for both electrical and gas monitoring cables and cover:
- moisture
- water
- damage
- dirt
- coal
- grease.

**Conveyor-car high wall mining** system deck activities may include launch vehicle and conveyor-cars powered by:
- electric (over hydraulic) systems
- water supply
- IGG
- communications
- gas monitoring devices.

**Specific safety requirements** may include:
- boarding and disembarking procedures
- advance and retraction procedures
- operational signal procedures.

**Start sequence** may include:
- plug-in
- activation of line breaker
- engagement of sequencing control.

**Co-ordination** requirements related to the mining of coal may involve:
• the functions of the system operator
• the loader driver.
Work area monitoring and response requirements may include:
- equipment damage
- coal flow
- high wall stability
- low wall stability
- lighting
- associated / close proximity machinery
- equipment and personnel
- impact of weather conditions.

Hazards may include:
- wet weather
- gas
- fire
- explosions
- highwall collapse
- falling material.

Emergency response requirements may include:
- blast door operations
- stand-off ramp operations
- re-action cylinder operations
- emergency retraction
- evacuation
- fire procedures.

Operator (operational) maintenance procedures are those established and authorised for the site.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to provide deck support for conveyor-car high wall mining operations on a mine site
- implementation of appropriate procedures and techniques for the efficient and effective provision of support for conveyor-car high wall mining operations on a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on conveyor-car high wall mining operations
  c. completing pre-start, start-up, function testing and shut-down procedures
  d. completing essential functions including:
      d.1. loading cars
      d.2. unloading cars
d.3. operating cars

d.4. operating pendant controls

d.5. completing operator maintenance.

**Required Knowledge**
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- site and equipment safety procedures
- site mining systems and procedures
- conveyor-car equipment characteristics, technical capabilities and limitations
- conveyor-car maintenance systems and procedures
- site geological and survey data
- mine gases and their properties / impacts
- deck based gas monitoring systems, processes and responses
- cable management procedures
- emergency retraction procedures
- emergency evacuation and fire procedures
- site environmental requirements and constraints related to conveyor-car high wall mining operations.

**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- apply operational safety requirements
- access, interpret and apply technical information
- apply hand-eye co-ordination
- work wearing noise protection equipment
- apply diagnostic techniques
- use relevant hand tools
- maintain equipment records
- dispose of environmentally sensitive fluids and materials
- apply chemical and fuel safety measures.

**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.
**Consistency in Performance**
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1081A  Implement, monitor, rectify and report on contracts

Unit Descriptor
This unit covers the administration, monitoring and completion of contracts for mine site equipment and plant commissioning, repair and decommissioning.

Units Replaced
This unit replaces the following units:
- MNC.G81.A Implement, monitor, rectify and report on contracts.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
</table>
| 1       | Implement, monitor and report administrative procedures.  
  1.1 Implement procedures for reviewing contract performance against performance criteria.  
  1.2 Implement procedures for monitoring and rectifying performance.  
  1.3 Develop and implement procedures for adjusting performance where performance does not meet contract requirements. |
| 2       | Monitor contract time frame and specifications.  
  2.1 Undertake regular inspection of contract services to ensure compliance with contract specifications.  
  2.2 Identify and document variations between the specified scope of services and the contract and notify relevant personnel.  
  2.3 Carry out testing of services in progress by the contractor in accordance with legislative, regulation and mine site requirements. |
| 3       | Resolve contractual disputes.  
  3.1 Investigate disagreements to identify cause and validity.  
  3.2 Negotiate and agree terms of resolution.  
  3.3 Follow contracted prescriptions for dispute resolution.  
  3.4 Seek specified advice to resolve disputes.  
  3.5 Seek appropriate technical/legal advice to clarify dispute issues. |
| 4       | Implement contract completion.  
  4.1 Review contract conditions and responsibilities with appropriate personnel to ensure satisfactory completion. |
4.2 Report contract completion to appropriate personnel.

4.3 Evaluate contract performance against agreed benchmarks.
RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Contract performance is evaluated in terms of:
- adherence to time lines
- costs
- progress towards objectives
- adherence to quality standards
- occupational health and safety standards.

Testing includes:
- sampling
- routine checks
- audit
- observation
- meetings
- occupational health and safety checks.

Contract conditions include:
- tender documentation
- maintenance plan
- defects liability.

Contract administration includes:
- supervision
- management
- monitoring
- overseeing.

Contract and services include:
- products
- maintenance contracts
- supply contract
- cleaning contracts
- waster removal contracts
- plant and equipment commissioning and decommissioning contracts
- equipment supply contracts
- other mine site requirements.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
knowledge of procedures, requirements and instructions to implement, monitor, rectify and report on contracts appropriate to a mine site

implementation of appropriate procedures and techniques for the efficient and effective implementation, monitoring, rectifying and reporting on contracts appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:

a. applying personal and operational safety procedures
b. interpreting and communicating information on contract progress
c. defining roles and responsibilities for management of contracts
d. documenting the contract management plan
e. reviewing and auditing the effectiveness of contracts
f. establishing and reviewing contract dispute resolution procedures
g. establishing statutory and mine site reporting procedures.

Required Knowledge

Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- legislative and statutory requirements and the instructions relating to contract maintenance
- mine operation procedures
- mine plans
- mine design relating to contracted services
- contract management requirements
- risk management procedures
- inspection and testing of contracted services / products
- mine reporting procedures
- review processes and techniques
- power sources, including electrical, hydraulic, pneumatic, diesel
- safety design feature of the contracted services
- standard operating procedures relating to the contract and services
- knowledge of contract design criteria
- training programs
- computer based systems.

Required Skills

Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- access, interpret and apply technical information and briefings to other staff
- apply the principles of contract management
- assess the risks and the hazards attached to contract management
- develop procedures appropriate to mine operations for management of contracts
- plan and coordinate work
- identify training needs related to contract management
- interpret and apply contract specifications
- conduct testing of contracted services and products.
Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
**MNCG1082A Implement, monitor, rectify and report on inventory control systems**

**Unit Descriptor**
This unit covers the management of an inventory control system.

**Units Replaced**
This unit replaces the following units:
- MNC.G82.A Implement, monitor, rectify and report on inventory control system

**Employability Skills**
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Implement inventory control system.</td>
</tr>
<tr>
<td>1.1</td>
<td>Identify resources, both human and technical, required to support implementation, and put in place.</td>
</tr>
<tr>
<td>1.2</td>
<td>Implement record keeping procedures.</td>
</tr>
<tr>
<td>1.3</td>
<td>Implement processes for controlling stock.</td>
</tr>
<tr>
<td>1.4</td>
<td>Implement reporting processes.</td>
</tr>
<tr>
<td>1.5</td>
<td>Communicate system to stakeholders.</td>
</tr>
<tr>
<td>2</td>
<td>Monitor inventory control system.</td>
</tr>
<tr>
<td>2.1</td>
<td>Establish procedures for monitoring inventory control system.</td>
</tr>
<tr>
<td>2.2</td>
<td>Audit inventory control system according to organisational specifications.</td>
</tr>
<tr>
<td>2.3</td>
<td>Implement discrepancy reporting procedures.</td>
</tr>
<tr>
<td>2.4</td>
<td>Supervise production of inventory system reports.</td>
</tr>
<tr>
<td>2.5</td>
<td>Analyse inventory reports.</td>
</tr>
<tr>
<td>2.6</td>
<td>Identify major trends.</td>
</tr>
<tr>
<td>2.7</td>
<td>Identify and document areas requiring adjustment and notify relevant personnel.</td>
</tr>
<tr>
<td>3</td>
<td>Rectify inventory control system.</td>
</tr>
<tr>
<td>3.1</td>
<td>Develop procedures for adjusting procedures and performance.</td>
</tr>
<tr>
<td>3.2</td>
<td>Undertake modifications to inventory control system according to organisational procedures.</td>
</tr>
<tr>
<td>3.3</td>
<td>Test modifications and make further modifications where necessary.</td>
</tr>
<tr>
<td>3.4</td>
<td>Record and report modifications to relevant personnel.</td>
</tr>
<tr>
<td>4</td>
<td>Report on inventory control system.</td>
</tr>
<tr>
<td>4.1</td>
<td>Document results of inventory control in accordance with organisational specifications.</td>
</tr>
</tbody>
</table>
4.2 Inform relevant parties of the results of inventory control according to organisation’s guidelines.
RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Resources required include:
- clerical / computer applications for maintaining records
- technical support
- data storage facilities.

Record keeping procedures include:
- requisition
- purchasing
- shipping
- invoicing.

Processes for controlling stock include:
- inventory lists
- stock lists.

Organisational systems, policies and procedures may include:
- quality systems
- standard operating procedures
- standard work practices
- organisational commitment
- corporate policy
- community consultation and involvement
- objectives and targets
- documentation and targets
- documentation and records
- responsibility and reporting structure
- inventory review audits
- supply and financial monitoring and measurement
- organisational Codes of Practice, Ethical Codes.

Legislation, codes, regulations and standards may include:
- Australian Standards
- environmental agencies regulations
- Environmental Protection Acts
- isolation procedures

manufacturer specifications and recommendations
- Coal Mining Acts and regulations
- occupational health and safety legislation
- mine manager’s rules.
EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to implement, monitor, rectify and report on inventory control system appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective implementation, monitoring rectifying and reporting on inventory control system appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on inventory control systems
  c. applying general management principles
  d. managing of contractors
  e. personnel management
  f. maintaining records
  g. budgeting and reporting procedures
  h. negotiating.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- site and equipment safety requirements
- monitoring of documentation
- auditing procedures
- software characteristics, technical capabilities and limitations
- reporting systems
- archiving
- record keeping procedures
- sources of stock / inventory information
- continuous improvement processes
- work roles.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- identify and interpret trends from inventory records
- read, interpret and apply inventory information
- apply diagnostic techniques
- apply inventory system relationship to manufacturing process
- record and report on management of inventory systems
- maintain accurate records
- communicate, orally and in writing, with a range of stakeholders
- demonstrate safe working practices
- work within standard operating procedures.
Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1083A Implement, monitor, rectify and report on maintenance management systems

Unit Descriptor
This unit covers the maintenance management systems in both underground and open cut mines.

Units Replaced
This unit replaces the following units:
- MNC.G83.A Implement, monitor, rectify and report on maintenance management systems.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Plan maintenance management system.</td>
<td>1.1 Develop maintenance procedures for plant and equipment from site and legislative requirements and incorporate into site documentation.</td>
</tr>
<tr>
<td></td>
<td>1.2 Develop maintenance schedules, based on manufacturer specifications and industry benchmarks.</td>
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<tr>
<td></td>
<td>1.3 Estimate budget requirements to ensure budget allocation is secured.</td>
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<tr>
<td></td>
<td>1.4 Allocate and train staff to meet maintenance schedules.</td>
</tr>
<tr>
<td></td>
<td>1.5 Document reporting structures.</td>
</tr>
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<td></td>
<td>1.6 Document regulations that impact upon maintenance operations.</td>
</tr>
<tr>
<td></td>
<td>1.7 Identify and contact stakeholders according to organisation’s guidelines.</td>
</tr>
<tr>
<td>2 Implement and monitor maintenance management system.</td>
<td>2.1 Implement maintenance management schedules.</td>
</tr>
<tr>
<td></td>
<td>2.2 Maintain maintenance records.</td>
</tr>
<tr>
<td></td>
<td>2.3 Use periodic and sample inspection reports to ascertain maintenance quality and the need for revision of maintenance schedule.</td>
</tr>
<tr>
<td></td>
<td>2.4 Analyse maintenance reports and system output information.</td>
</tr>
<tr>
<td></td>
<td>2.5 Identify defective components, sub-assemblies and design faults.</td>
</tr>
<tr>
<td></td>
<td>2.6 Monitor effectiveness of policies, plans, procedures and workplace practices against objectives, timelines,</td>
</tr>
</tbody>
</table>
key performance indicators and regulations.

2.7 Monitor the impact of *contingencies*.

2.8 Monitor effective use of resources.

3 Rectify maintenance management system.

3.1 Develop and document corrective action plan, based on outcome of monitoring process.

3.2 Implement and test modifications.

3.3 Document system modifications.

4 Report on maintenance management system.

4.1 Document system in accordance with organisation’s guidelines.

4.2 Communicate system to relevant personnel.

**RANGE STATEMENT**

The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

**Maintenance** includes:
- servicing of equipment
- repairing of equipment
- overhauling of equipment.

**Equipment** may include:
- complex hydraulic systems
- air systems
- rope systems
- transmission system.

**Stakeholders** may include:
- regulatory authorities
- project managers
- contractors
- client representatives
- government authorities
- community groups
- engineers
- architects
- employee.

**Policies, plans and procedures** may include:
- OH&S
- skills required
- frequency and level of maintenance work
• trade practices
• weights and measures
• industrial relations
• dangerous goods
• Coal and Extractive Industry Licensing
• Enterprise Agreements
• development of training policies/programs to aid compliance
• organisational commitment
• corporate and environment policy
• environmental impact assessment
• community consultation and involvement
• objectives and targets
• documentation and records
• operational and emergency procedures
• responsibility and reporting structure
• environment impact, regulatory and legal compliance
• maintenance review audits
• emission and performance monitoring and measurement.

**Regulations** may include:
• Australian Standards
• environment agencies regulations
• Environmental Protection Acts
• isolation procedures

**manufacturer specifications and recommendations**
• Coal Mining Act
• occupational health and safety legislation
• common law
• mine manager’s rules.

**Contingencies** may include:
• equipment failure
• observation errors
• movement
• weather
• injury
• obstructions.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**

The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
• knowledge of procedures, requirements and instructions to implement, monitor, rectify and report on maintenance management systems appropriate to a mine site
• implementation of appropriate procedures and techniques for the efficient and effective implementation, monitoring and reporting on maintenance management systems
appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:

a. conducting an activity safely and efficiently
b. achieving quality and productivity targets
c. adhering to and understanding relevant legislative (State and Federal) requirements and site requirements
d. adhering to and understanding environmental and heritage issues
e. applying personal and operational safety procedures
f. interpreting and communicating information on inventory control systems
g. applying general management principles
h. managing contractors
i. managing permit systems
j. controlling hazard and explosion protection of mechanical equipment
k. assessing and controlling risk
l. managing personnel
m. maintaining records
n. budgeting and reporting procedures
o. negotiating.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- legislative, statutory, Australian Standards and site specific requirements for maintenance of mechanical systems, including communications, emergency procedures, risk management, recording and reporting, mines rescue, OH&S, manufacturer instructions, standard work procedures, training, fire fighting, handling and storing of dangerous goods, local government and power authority requirements
- mine operating systems and procedures, including transport systems, conveyor systems, systems of mining, ventilation systems, gas management systems and mine water management systems
- stores systems
- underground roadway and drilling
- protection systems
- reticulation systems
- specifications from mechanical systems
- audit procedures
- mine design principles and procedures relating to mechanical systems
- company organisation
- computer based systems
- training programs
- safety design features for maintenance of mechanical systems
- maintenance surveys
- work role definitions
- reporting methods and alternatives
- community expectations
- consultative strategies
- alternative documentation systems for procedures.
Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- access, interpret and apply
  - technical information
  - site / legislative requirements
  - records and reports
  - briefings and handover details
- apply the principles of mine design
- assess the risks and consequences attached to mechanical systems
- develop procedures appropriate to mine operations for management of mechanical systems
- plan and coordinate work
- manage confined spaces
- identify training needs related to mechanical systems
- interpret manufacturer instructions
- conduct maintenance surveys
- use interpersonal skills
- liaise with other parties
- coordinate others
- information management
- problem solve
- analysis
- use measuring equipment
- write clear reports
- facilitate meeting.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.
**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1084A Implement, monitor, rectify and report on mobile plant and equipment systems

Unit Descriptor
This unit covers the management of mobile plant and equipment systems in both underground and open cut mines.

Units Replaced
This unit replaces the following units:
- MNC.G84.A Implement, monitor, rectify and report on mobile plant and equipment systems

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Implement mobile plant and equipment systems.</td>
</tr>
<tr>
<td>1.1</td>
<td>Document responsibilities of personnel.</td>
</tr>
<tr>
<td>1.2</td>
<td>Document reporting structures.</td>
</tr>
<tr>
<td>1.3</td>
<td>Document regulations and site requirements that impact upon work operations.</td>
</tr>
<tr>
<td>1.4</td>
<td>Develop and document systems to comply with legislative and statutory requirements.</td>
</tr>
<tr>
<td>1.5</td>
<td>Document operational and emergency procedures.</td>
</tr>
<tr>
<td>1.6</td>
<td>Identify and contact stakeholders according to organisation’s guidelines.</td>
</tr>
<tr>
<td>1.7</td>
<td>Implement mobile plant and equipment systems according to manufacturer specifications, site requirements and organisational procedures.</td>
</tr>
<tr>
<td>2</td>
<td>Monitor mobile plant and equipment systems.</td>
</tr>
<tr>
<td>2.1</td>
<td>Monitor effectiveness of policies, plans, procedures and workplace practices against objectives, timelines, key performance indicators and regulations.</td>
</tr>
<tr>
<td>2.2</td>
<td>Validate and record use of mobile plant and equipment systems in accordance with the project specifications.</td>
</tr>
<tr>
<td>2.3</td>
<td>Assess operating constraints.</td>
</tr>
<tr>
<td>2.4</td>
<td>Monitor the impact of contingencies.</td>
</tr>
<tr>
<td>2.5</td>
<td>Monitor effective use of resources.</td>
</tr>
<tr>
<td>3</td>
<td>Rectify mobile plant and equipment systems.</td>
</tr>
<tr>
<td>3.1</td>
<td>Use available information from monitoring processes to ensure accurate problem identification.</td>
</tr>
<tr>
<td>3.2</td>
<td>Obtain specialist advice/assistance where required.</td>
</tr>
<tr>
<td>3.3</td>
<td>Manage the impact of contingencies.</td>
</tr>
</tbody>
</table>
3.4 Implement rectification requirements.
4.1 Document results in accordance with project specifications.
4.2 Inform relevant parties of the results according to organisation’s guidelines.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Stakeholders may include:
- client
- client representatives
- government authorities
- community groups
- engineers
- architects
- contractors.

Mobile plant and equipment systems may include:
- crushing and screening plants
- gyratory / jaw crushers
- cone crushers
- double roll crushers
- hammermills
- double roll sledging crushers
- tube feeders
- slot feeders
- apron feeders
- roller and rotary feeders
- vibratory feeders
- reciprocating-plate feeders
- screw feeders
- conveyor belts
- drive arrangements.

Policies, plans and procedures may include:
- organisational commitment
- corporate and environment policy
- environmental impact assessment
- community consultation and involvement
- objectives and targets
- surveying program
- documentation and records
- operational and emergency procedures
• responsibility and reporting structure
• environmental impact, regulatory and legal compliance
• survey review audits
• emission and performance monitoring and measurement
• land reclamation practices.

**Constraints** may be related to:
• roadway size
• pillar sizes
• depth of cover and underlying / overlying strata
• stress regimes
• underground opening characteristics
• water ingestion
• systems of mining
• breaker liner supports
• direction of mining.

**Contingencies** may include:
• equipment failure
• observation errors
• movement
• weather
• injury
• obstructions.

**Legislative and statutory requirements** may include:
• Australian Standards
• environmental agencies regulations
• environmental protection acts
• isolation procedures

**manufacturer specifications and recommendations**
• Coal Mining Act
• occupational health and safety legislation
• mine manager’s rules.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
• knowledge of procedures, requirements and instructions to Implement, monitor, rectify and report on mobile plant and equipment systems appropriate to a mine site
• implementation of appropriate procedures and techniques for the efficient and effective implementation, monitoring and reporting on mobile plant and equipment systems appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
a. conducting an activity safely and efficiently
b. achieving quality and productivity targets
c. adhering to and understanding relevant legislative (State and Federal) requirements and mine manager’s rules
d. adhering to and understanding environmental and heritage issues.

**Required Knowledge**
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- accuracy and precision requirements
- limitations of mobile plant and equipment systems
- project reporting guidelines
- risk management principles
- company organisation
- work role definitions
- reporting methods and alternatives
- relevant regulations, licenses and permits
- emergency procedures and obligations
- community expectations
- consultative strategies
- alternative documentation systems for procedures.

**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
- develop responsibility / motivation
- apply policy management skills
- demonstrate interpersonal skills
- liaise with other parties
- coordinate others
- apply information management systems
- solve problems
- analyse
- use measuring equipment
- write clear reports
- facilitate meetings

**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.
Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence require to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1090A Establish and maintain the mine electrical installations, reticulation and protection systems

Unit Descriptor
This unit covers the functions of establishing reviewing, monitoring, installing and auditing electrical installations, reticulation, control and protection systems at a mine site.

Units Replaced
This unit replaces the following units:
- MNC.G90.A Establish and maintain the mine electrical reticulation and protection system.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Provide power supply systems for the mine site.</td>
</tr>
<tr>
<td>1.1</td>
<td>Access, interpret and clarify the legislative and site requirements related to mine electrical power supply systems.</td>
</tr>
<tr>
<td>1.2</td>
<td>Install, maintain, review and modify mine power supply systems.</td>
</tr>
<tr>
<td>1.3</td>
<td>Undertake processes and procedures to ensure reliability and quality of supply taking into account transients, harmonics, over-voltages, voltage regulation, lightning and stray currents.</td>
</tr>
<tr>
<td>1.4</td>
<td>Plan and install alternative power supply associated with mine site conditions and safety needs.</td>
</tr>
<tr>
<td>1.5</td>
<td>Undertake processes and procedures to protect high energy sources (sub stations and transformers) through the selection and installation of switchgear and protective devices.</td>
</tr>
<tr>
<td>1.6</td>
<td>Provide mine illumination systems and equipment in accordance with site operations and safety needs.</td>
</tr>
<tr>
<td>1.7</td>
<td>Plan and install battery and associated charging equipment in accordance with mine site conditions and safety needs.</td>
</tr>
<tr>
<td>1.8</td>
<td>Review audit and maintain all power supply systems in accordance with the legislative and site requirements.</td>
</tr>
</tbody>
</table>

| 2       | Provide electrical protection system for mine sites. |
| 2.1     | Access, interpret and clarify the legislative and site requirements related to mine electrical protection system. |
| 2.2     | Install and maintain the electrical protection system. |
| 2.3     | Identify, isolate, rectify faults in electrical installations. |
and verify ability of the system through recognised decision making processes, including the use of fault level calculations, discrimination and component ratings.
<p>| | |</p>
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<tbody>
<tr>
<td>2.4</td>
<td>Apply management decision making processes for the maintenance, examination and testing of <em>electrical protection systems</em> relative to mine site and safety needs.</td>
</tr>
<tr>
<td>2.5</td>
<td>Review, modify, audit and maintain all <em>electrical protection systems</em> and devices in accordance with legislative and site requirements.</td>
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<tr>
<td>3</td>
<td>Provide cables from power source to point of usage.</td>
</tr>
<tr>
<td></td>
<td>3.1 Access, interpret, clarify and implement the legislative and <em>site requirements</em> related to provision and use of <em>mine cables</em>.</td>
</tr>
<tr>
<td></td>
<td>3.2 Identify, select and install <em>mine cables</em> in accordance with legislative and site requirements.</td>
</tr>
<tr>
<td></td>
<td>3.3 Identify, report and rectify <em>mine cable</em> faults and <em>hazards</em> in accordance with mine site and hazard control requirements.</td>
</tr>
<tr>
<td></td>
<td>3.4 Inspect <em>mine cables</em> for their integrity, usage, consequence of fault/damage and previous repairs.</td>
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<tr>
<td></td>
<td>3.5 Carry out management, inspection, application, testing, fault finding and repair in accordance with legislative and site requirements.</td>
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<tr>
<td>4</td>
<td>Provide mobile machinery and electrical apparatus.</td>
</tr>
<tr>
<td></td>
<td>4.1 Access, interpret, clarify and implement the legislative and <em>site requirements</em> related to provision and use of mobile machinery and electrical apparatus.</td>
</tr>
<tr>
<td></td>
<td>4.2 Identify, select and install mobile machinery and electrical apparatus in accordance with legislative and site requirements.</td>
</tr>
<tr>
<td></td>
<td>4.3 Inspect, monitor, report and rectify mobile machinery and electrical apparatus faults and <em>hazards</em> in accordance with legislative and site requirements.</td>
</tr>
<tr>
<td></td>
<td>4.4 Carry out testing in accordance with the legislative and site requirements.</td>
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<tr>
<td>5</td>
<td>Provide overall electrical services that apply to production systems.</td>
</tr>
<tr>
<td></td>
<td>5.1 Access, interpret, clarify and implement the legislative and <em>site requirements</em> related to overall electrical services that apply to production systems.</td>
</tr>
<tr>
<td></td>
<td>5.2 Select, install, monitor and maintain mine <em>communication systems</em> in accordance with legislative and site requirements.</td>
</tr>
</tbody>
</table>
5.3 Select, install, monitor, modify and maintain the electrical components of the gas monitoring and detection systems in accordance with legislative and site requirements.

5.4 Select, install, monitor, modify and maintain control systems.

5.5 Control, monitor and rectify electromagnetic interference that may affect the safe use of electrical systems and other mining equipment.

5.6 Select, install, monitor, modify and maintain remote control systems on mining equipment to comply with legislative and site requirements.

5.7 Select, install, monitor, modify and maintain welding equipment and energy delivery sources to comply with legislative and site requirements, including pre and post operations.

5.8 Identify, control and manage hazards from electrostatic charges.

6 Provide safe electrical work procedures.

6.1 Access, interpret, clarify and implement the legislative and site requirements related to safe electrical work procedures.

6.2 Monitor and audit safe electrical work procedures.

6.3 Determine and implement training needs.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

All activities relevant to this unit are carried out in accordance with the relevant Australian Standards and Codes for the above operational electrical / electrician requirements.

Mine power supply systems for mines refers from extra low through to high voltage switching and distribution systems on mines as well as mine earthing systems, UPSs, generators/alternators.

Electrical protection system for mine sites will include:
- over current and earth fault protection systems
- earth continuity monitoring systems and devices
- earth leakage protection systems and devices
- earth fault current limitation systems
- frozen contactors (loss of vacuum) systems and devices.
Electrical protection systems in mines shall include, but not be limited to:
- protection against short-circuit
- over-current
- earth fault
- earth leakage

Mine cables may include:
- feeder
- trailing and reeling cables
- all other cabling used for power reticulation, control, data and signalling in the mining environment.

Hazards may include:
- electric shock
- burns
- electric arcing and explosions
- electric ignition of flammable gases and dusts
- transient over-voltage
- lightning
- uncontrolled operation of machinery
- loss of communications
- failure of protection systems
- hazardous area electrical equipment for mines, including certified explosion protected electrical equipment for underground and surface mines.

Control systems are systems that automatically control equipment such as:
- winders
- wash plant
- other related operational production systems / processes
- mobile machinery
- conveyors
- longwall.

Remote control systems include systems used to operate fixed, transportable and mobile mining machinery from a distance. They may be:
- radio controlled
- infra red control
- umbilical control.

Safe electrical work procedures may include:
- identification and classification of hazardous areas
- restoration and removal of power
- isolation
- electrical testing
- welding
- electric shock protocols
- purging.
Communications systems may include telephone, radio, PED, microwave and hardwired systems for voice and data communications throughout the mine.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to establish and maintain the electrical installations, reticulation and protection systems appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective establishment and maintenance of electrical installations, reticulation and protection systems appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. implement and applying personal and operational safety procedures
  b. evaluation and selection activities associated with electrical installations, reticulation, control and protection systems at a mine site
  c. modifying and evaluating changes to electrical installations, reticulation, control and protection systems at a mine site
  d. installing, examining, testing, maintaining and auditing the effectiveness of electrical installations, reticulation, control and protection systems at a mine site
  e. selecting and developing responses and procedures for electrical installations, reticulation, control and protection systems at a mine site
  f. defining roles and responsibilities for personnel associated with electrical installations, reticulation, control and protection systems at a mine site
  g. identifying training needs for personnel associated with electrical installations, reticulation, control and protection systems at a mine site
  h. interpreting and communicating information on electrical installations, reticulation, control and protection systems at a mine site
  i. conducting risk assessments to identify hazards and risks associated with electrical installations, reticulation, control and protection systems at a mine site
  j. documentation of electrical installations, reticulation, control and protection systems and procedures at a mine site.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- legislative and site requirements, inspections, and reporting procedures
- electrical protection theory, including earthing systems, co-ordination and fault level calculations, step and touch potential management
- fault discrimination and fault clearance characteristics of equipment
- mining electrical protection systems, including earth continuity monitoring, earth leakage protection, earth fault current limitation and relevant standards
- typical low and high voltage switching and distribution systems on mines
• transient over-voltages, harmonics and lightning theory, hazards and protection schemes
• hazards associated with high energy systems in mining
• mining cables, faults and consequences, cable protection systems, standards and cable repair
• classification of hazardous areas and explosion-protected electrical equipment principles, general requirements, verification, testing and standards
• automatic control system hazards, protection schemes and standards
• electromagnetic interference hazards, protection schemes and standards
• management and control of processes for change to software and hard wired based systems
• electromagnetic interference hazards, protection schemes and standards
• radio remote control systems hazards, protection schemes and standards
• safety protective devices associated with welding machines such as Voltage Reducing Devices

• access, interpret and apply:
  – technical information
  – site/legislative requirements
  – records and reports
• application of the principles of electrical installations, reticulation, control and protection system theory
• evaluation of designs and installations of electrical installations, reticulation, control and protection systems at a mine in terms of safety requirements
• assessment of the risks associated with and consequences of failure of electrical installations, reticulation, control and protection systems at a mine
• assessment of the risks associated with and consequences of changes to electrical installations, reticulation, control and protection systems at a mine
• development of procedures, appropriate to the mine operations, for management, operation, testing and maintenance of the mines electrical installations, reticulation, control and protection systems
• plan, co-ordinate and document work on the mines electrical installations, reticulation, control and protection systems
• identify training needs related to the safety aspects of the mines electrical installations, reticulation, control and protection systems.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
• access, interpret and apply:
  – technical information
  – site/legislative requirements
  – records and reports
• apply the principles of electrical installations, reticulation, control and protection system theory
• evaluate designs and installations of electrical installations, reticulation, control and protection systems at a mine in terms of safety requirements
• assess the risks associated with and consequences of failure of electrical installations, reticulation, control and protection systems at a mine
• assess the risks associated with and consequences of changes to electrical installations, reticulation, control and protection systems at a mine
• develop procedures, appropriate to the mine operations, for management, operation, testing and maintenance of the mines electrical installations, reticulation, control and protection systems
• plan, co-ordinate and document work on the mines electrical installations, reticulation, control and protection systems
• identify training needs related to the safety aspects of the mines electrical installations, reticulation, control and protection systems.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit must be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
• observation of processes and procedures
• oral and/or written questioning on required knowledge and skills
• testimony from supervisors, colleagues, clients and/or other appropriate persons
• inspection of the final product or outcome
• a portfolio of documentary evidence
• simulation and/or scenario analysis.
Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons. Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
**MNCG1091A Implement, monitor, rectify and report on interfaces between electrical and mechanical componentry**

**Unit Descriptor**
This unit covers working with mechanical components of electrical machinery.

**Units Replaced**
This unit replaces the following units:
- MNC.G91.A Implement, monitor, rectify and report on interfaces between electrical and mechanical componentry.

**Employability Skills**
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
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</thead>
</table>
| 1 Determine requirements of electrical and mechanical interface. | 1.1 Examine components defect reports.  
1.2 Inspect components according to site, legislative and manufacturer procedures.  
1.3 Prepare reports detailing the equipment modifications requirements. |
| 2 Plan rectification work on electrical and mechanical interface componentry. | 2.1 Use available information from maintenance and test results to ensure accurate problem identification.  
2.2 Identify componentry faults and causes.  
2.3 Report fault rectification requirements.  
2.4 Obtain specialist advice/assistance where required.  
2.5 Isolate/tag componentry for rectification work. |
| 3 Rectify electrical and mechanical interface componentry | 3.1 Dismantle componentry parts in accordance with manufacturer requirements and safe working procedures.  
3.2 Assess componentry parts for serviceability.  
3.3 Undertake modifications according to manufacturer specifications/specialist advice.  
3.4 Replace componentry parts according to manufacturer specifications/safe working procedures.  
3.5 Test componentry for safe working with proscribed specifications.  
3.6 Record repaired/modified componentry details.  
3.7 Notify appropriate personnel of repairs/modifications. |
MNCG1091A Implement, monitor, rectify and report on interfaces between electrical and mechanical componentry
RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Electrical componentry may include componentry in:
- power systems
- electrical protection systems
- mine cabling
- remote control systems
- communication systems.

Mechanical componentry may include:
- hydraulic components
- air system components
- rope system components
- transmission systems components.

Legislative and manufacturer procedures may include:
- Australian Standards
- environmental agencies regulations
- environmental protection acts
- isolation procedures
- manufacturer specifications and recommendations
- Coal Mining Acts and regulations
- occupational health and safety legislation
- common law
- mine manager’s rules.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to implement, monitor, rectify and report on interfaces between electrical and mechanical componentry appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective implementation, monitoring, rectifying and reporting on interfaces between electrical and mechanical componentry appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on interface componentry
  c. completing equipment pre-start, start-up and shut-down procedures
  d. completing house keeping requirements
  e. following and applying authorised disassembly and assembly procedures
f. disposing of environmentally sensitive oils, fluids and materials

Required Knowledge

Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- legislative, statutory, Australian Standards and site specific requirements for maintenance of mechanical systems, including communications, emergency procedures, risk management, recording and reporting, mines rescue, OH&S, manufacturer instructions, standard work procedures, training, fire fighting, handling and storage of dangerous goods, local government and power authority requirements
- mine operating systems and procedures, including transport systems, conveyor systems, systems of mining, ventilation systems, gas management systems and mine water management systems
- stores systems
- underground roadway and drilling
- protection systems
- reticulation systems
- specification for mechanical systems
- audit procedures
- mine design principles and procedures relating to mechanical systems
- company organisation
- computer based systems
- training programs
- safety design features for maintenance of mechanical systems
- maintenance surveys
- work role definitions
- reporting methods and alternatives
- community expectations
- consultative strategies
- alternative documentation systems for procedures.

Required Skills

Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- access, interpret and apply
  - technical information
  - site / legislative requirements
  - records and reports
  - briefings and handover details
- apply the principles of mine design
• assess the risks and consequences attached to mechanical systems
• develop procedures appropriate to mine operations for management of mechanical systems
• plan and coordinate work
• manage confined spaces
• identify training needs related to mechanical systems
• interpret manufacturer instructions
• conduct maintenance surveys
• liaise with other parties
• coordinate others
• use information management
• solve problems
• analyse
• use measuring equipment
• write clear reports
• facilitate meetings
• apply operational and safety requirements
• read, interpret and apply technical instrument information
• apply diagnostic techniques
• apply environmental constraints in rectification operations
• maintain equipment records
• dispose of environmentally sensitive fluids and materials.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.
The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**

Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1101A Establish and maintain the environmental management system

Unit Descriptor
This unit covers the establishment and management of the environmental management system in a mining organisation. Its application is to ensure the workplace is, as far as is reasonably achievable, safe and without risks to the health of employees. The safety system may also be known as the Safety and Health Management System.

Units Replaced
This unit replaces:
- part of the unit MNQSM02 Design, maintain and evaluate organisational risk management processes associated with occupational health and safety and environmental management systems
- MNIL03A Establish and manage the environmental management system.

Links outside this unit
The work covered in this unit is equivalent to the work in MNQGEN620A Establish and maintain the environmental management system.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Establish and maintain the framework for the environmental management system.</td>
<td>1.1 Develop, document and have approved policies and system procedures that clearly express the organisation’s commitment to environmental management and how relevant environmental legislation will be implemented, consistent with overall organisational policies.</td>
</tr>
<tr>
<td></td>
<td>1.2 Define, allocate and include in job descriptions and duty statements for all relevant positions, responsibilities and duties that will allow implementation and integration of the environmental management systems.</td>
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<td></td>
<td>1.3 Identify, source and/or provide the resources for the operation of the environmental system in a timely and consistent manner.</td>
</tr>
<tr>
<td></td>
<td>1.4 Provide and explain information on environmental management system and procedures for the area of responsibility in a form readily accessible to employees.</td>
</tr>
</tbody>
</table>
2 Establish and maintain participative arrangements for the management of the environmental system.

2.1 Establish and ensure the maintenance of appropriate consultative processes, in consultation with employees and their representatives, in accordance with relevant legislation and consistent with the organisation’s overall process for consultation.

2.2 Ensure issues raised through participation and consultation are dealt with and resolved promptly and effectively in accordance with procedures for issue resolution.

2.3 Ensure information about the outcomes of participation and consultation is provided in a manner accessible to employees.

3 Establish and maintain procedures for identifying environmental hazards.

3.1 Ensure existing and potential environmental hazards are identified and confirmed, in accordance with environmental legislation, codes of practice and trends identified from the environmental record system.

3.2 Develop and maintain system procedures for the ongoing identifying of existing and potential environmental hazards and ensure the implementation of these procedures in site procedures and systems of work.

3.3 Monitor activities to ensure that environmental hazard identification procedure is adopted effectively throughout the organisation.

3.4 Ensure procedures are in place and apply for environmental hazard identification at the planning, design and evaluation stages of any change in the workplace to ensure that new hazards are not created.

4 Establish and maintain procedures for assessing environmental risk.

4.1 Ensure appropriate assessment of risks presented by identified environmental hazards is carried out in accordance with the environmental legislation and Codes of Practice.

4.2 Develop a system procedure for ongoing assessment of risks and ensure its integration within site procedures and systems of work.

4.3 Monitor activities to ensure that risk assessment procedure is adopted effectively throughout the organisation.

4.4 Ensure procedures are in place for risk assessment to be addressed at the planning, design and evaluation stages of any change within the organisation to ensure that risks are not created.
5 Establish and maintain procedures for treating environmental risks.

5.1 Develop and ensure implementation of measures to treat assessed risks in accordance with relevant environmental legislation, codes of practice and trends identified from the environmental records system.

5.2 Ensure the implementation of interim solutions until a permanent control measure is developed when measures which treat a risk at its source are not immediately practicable.

5.3 Develop system procedures for ongoing control of risks and ensure their integration within site procedures and general systems of work.

5.4 Monitor activities to ensure that the risk treatment procedure is adopted effectively throughout the organisation.

5.5 Ensure risk treatment is addressed at the planning, design and evaluation stages of any change within the organisation to ensure that adequate risk control measures are included.

5.6 Identify inadequacies in existing risk treatment measures and seek and provide resources to enable implementation of new measures according to appropriate procedures.

6 Establish and maintain organisational procedures for dealing with hazardous environmental events.

6.1 Identify the range of most likely potential hazardous environmental events.

6.2 Develop systems procedures in consultation with appropriate emergency services that would treat the risks associated with the potential hazardous events that meet legislative requirements, as a minimum.

6.3 Provide appropriate information and training to all employees to enable implementation of the correct procedures in all relevant circumstances.

7 Establish and maintain an environmental training program.

7.1 Develop and ensure implementation of an environmental training program to identify and fulfil employees’ environmental training needs.

8 Establish and maintain a system for environmental records.

8.1 Establish and monitor the system for keeping environmental records to allow identification of patterns of environmental non-compliance within the organisation.
9 Evaluate the organisation’s Environmental system and related policies, procedures and programs.

9.1 Assess the effectiveness of the organisation’s Environmental Management System and related policies, procedures and programs in accordance with the organisation’s goals and objectives and statutory requirements.

9.2 Develop and ensure implementation of improvements to the Environmental Management System to ensure more effective achievement of the organisation’s aims with respect to the environmental management.
9.3 Assess compliance with *environmental legislation* and codes of practice to ensure that legal environmental standards are maintained, as a minimum.

**RANGE STATEMENT**

The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

*Environmental Management System (EMS)* the part of the overall management system which includes organisational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy, and so managing the environmental risks associated with the business of the organisation.

*Environmental policy* is the statement by the organisation of its intentions and principles in relation to its overall environmental performance which provides a framework for action and for the setting of its environmental objectives and targets.

The system’s procedures are the procedures that support and expand on the policy and set out the requirements for implementing the system on individual sites. They provide direction and guidance to those responsible for implementation of the system and in the preparation of site specific work procedures, instruction and practices to put the system into effect.

**Systems procedures** may include:
- identification of hazards
- risk identification
- risk assessment
- risk treatment
- interim solutions
- dealing with unplanned incidents and events
- consultation
- communication
- monitoring
- review
- record keeping
- reporting
- training.

**Relevant positions** may include:
- managers
- supervisors,
- environmental officer/manager
- laboratory personnel
- all mine site personnel.
Resources may include:
- people
- finance
- buildings/facilities
- technology
- information.

Consultation may include:
- environmental committees
- consultation with health and safety representatives
- issue resolution procedures
- participative/consultative procedures conducted by supervisory staff within the area of managerial responsibility.

Monitoring may include:
- review of written reports
- performance appraisal
- auditing procedures.

Hazard is defined as: “a source of potential harm or a situation with a potential to cause loss” (definition from AS/NZS 4360:1999 Risk Management)

Hazard identification is the process of recognising that a hazard exists and defining its characteristics.

Existing and potential hazards can be identified from:
- site inspections
- checklists
- hazard identification processes
- hazardous event reports
- significant incident reports.

Risk is defined as: the chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood (definition from AS/NZS 4360:1999 Risk Management).

Risk management is defined as: the culture, processes and structures that are directed towards the effective management of potential opportunities and adverse effects (definition from AS/NZS 4360:1999 Risk Management).

Risk assessment is defined as: the overall process of risk analysis and risk evaluation (definition from AS/NZS 4360:1999 Risk Management).

Risk control is defined as: that part of risk management which involves the implementation of policies, standards, procedures and physical changes to eliminate or minimize adverse risks (definition from AS/NZS 4360:1999 Risk Management).
**Risk acceptance** is defined as: *an informed decision to accept the consequences and the likelihood of a particular risk* (definition from AS/NZS 4360:1999 *Risk Management*). The criteria for acceptability of risks must be determined by the organisation’s internal policy, goals and/or objectives.

**Relevant statutory/legal requirements** may include:
- maintenance of records for statutory/legal breaches
- provision of information and training
- regulations and codes of practice relating to statutory/legal compliance
- site representatives and committees
- issue resolution.

**Legislative compliance** will typically involve:
- mines department/mineral resources or appropriate body
- safety and health legislative body
- environmental authority
- State/Federal/local government authorities
- emergency services.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to establish and maintain the environmental management system appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective establishment and maintenance of the environmental management system appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. interpreting and communicating information on health and safety management
  b. establishing the framework for the Environmental Management System
  c. integrating the Environmental Management System with other management systems
  d. defining roles and responsibilities for system management
  e. establishing reviewing statutory reporting procedures
  f. establishing and reviewing the competency training programs
  g. monitoring the implementation of the system
  h. monitoring and reviewing the effectiveness of the mine Environmental Management Systems
  i. applying continuous improvement processes.
Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- environmental legislation, policies and codes of practice
- environmental auditing
- statutory/legal control
- duty of care
- training design and management
- emergency procedures
- strategic planning
- human resource management
- statutory and site rules, policies, procedures and regulations
- risk management processes and techniques
- action planning methods
- continuous improvement processes
- company policies.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
- access and analyse archival and historical information on mine environmental matters
- access, interpret and apply technical environmental information
- apply and manage research techniques and activities
- audit environmental systems and recommend strategies for improvement
- communicate effectively in the workplace
- develop and introduce practices to improve environmental performance in the workplace
- develop and maintain risk management procedures and policies
- develop and maintain statutory/legal and organisational policies and procedures
- explain complex information to superiors/subordinates
- maintain relevant records and documents
- monitor and decide on changes to process
- provide coaching and mentoring support
- take a leading role in initiating action and making decisions
- use effective consultative mechanisms to negotiate processes and procedures appropriate to workplace environmental performance.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.
Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1102A Establish the statutory compliance management system

Unit Descriptor
This unit covers the use of appropriate measures and criteria to establish a mining organisation’s statutory compliance management system. It includes establishing the framework of the system, establishing the processes to support the system; planning and facilitating the implementation of the system; auditing the statutory compliance management processes; and ensuring completion of records and reports.

Units Replaced
This unit replaces the units MNIC01A Establish the mine statutory/legal compliance system.

Links outside this unit:
The work described in this unit is equivalent to that in MNQGEN601A Establish the statutory compliance management system.

The work in this unit relates to Australian Standard AS/NZS 4360:1999 Risk Management.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

### ELEMENT PERFORMANCE CRITERIA

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Establish the framework for the system.</td>
</tr>
<tr>
<td></td>
<td>1.1 Develop the policy and objectives that express the organisation’s commitment to statutory compliance management.</td>
</tr>
<tr>
<td></td>
<td>1.2 Establish and implement the structure and framework of the statutory compliance management system.</td>
</tr>
<tr>
<td></td>
<td>1.3 Define, allocate and document responsibilities for statutory compliance management in job descriptions and duty statement for all relevant positions.</td>
</tr>
<tr>
<td>2</td>
<td>Establish processes to support the system.</td>
</tr>
<tr>
<td></td>
<td>2.1 Develop, document and communicate detailed systems procedures for the statutory compliance system.</td>
</tr>
<tr>
<td></td>
<td>2.2 Provide/arrange appropriate development and/or training for those who have responsibilities within the statutory compliance management system.</td>
</tr>
<tr>
<td></td>
<td>2.3 Identify, obtain and maintain information sources required to support the statutory compliance management system and make them available to those who implement the statutory compliance management processes.</td>
</tr>
<tr>
<td></td>
<td>2.4 Make available information on known and intended process changes and enhancements to those responsible for implementing the statutory compliance processes.</td>
</tr>
</tbody>
</table>
management processes.

2.5 Obtain and provide *expert advice* as necessary to those responsible for implementing statutory compliance management processes.

3 Plan and facilitate the implementation of the system.

3.1 Plan, schedule and document the systems coverage of the entire work environment.

3.2 *Monitor* the system activities and achievement targets and provide/focus *resources* to ensure the work plan is satisfied.

3.3 Provide support and encouragement to those responsible for the detailed system activities.

3.4 Review and update periodically the system work plan when changing circumstances are anticipated/occur.

4 Audit the management processes.

4.1 Formally *audit* statutory compliance management processes, including operating procedures and implementation processes, to ensure compliance and effectiveness.

4.2 Respond to changed requirements disclosed during audits in a systematic and timely manner.

4.3 Complete and retain statutory compliance management documentation covering the reasons for and changes made in accordance with the organisation and relevant *legislative requirements*.

5 Complete records and reports.

5.1 Ensure all statutory compliance management *documentation* is produced, processed and maintained as specified by legislative and organisation’s requirements.

**RANGE STATEMENT**

The following range of variables is subject to site specific operations, but is not limited to the following details. The organisation’s procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

**Statutory compliance** may include:

- Trade Practices
- weights and measures
- waterways
- workers compensation/work cover
- planning and assessment
- local government
- dangerous goods
• minerals and extractive industry licensing
• industrial relations
• navigation
• Mines Act
• common law.

The policy is the statement of over all intent and direction of the organisation in respect of the specific area of managerial responsibility.

The system’s procedures are the procedures that support and expand on the policy and set out the requirements for implementing the system on individual sites. They provide direction and guidance to those responsible for implementation of the system, including the preparation of site specific work procedures, instruction and practices to put the system into effect.

System’s procedures may include:
• identifying potential and existing non-compliance
• treating compliance
• controlling compliance
• dealing with unplanned incidents and events
• consultation
• communication
• monitoring
• auditing
• reviewing
• record keeping
• reporting
• training.

Resources may include:
• people
• finance
• equipment
• buildings/facilities
• technology
• information.

Expert advice may be obtained from:
• regulatory authorities
• employees
• community
• customers
• suppliers
• tenderers
• project managers
• contractors.

Monitor is to check, supervise, observe critically or record the progress of an activity, action or system on a regular basis in order to identify change.
Audit is defined as: a systematic examination against defined criteria to determine whether activities and related results conform to planned arrangement, and whether these arrangements are implemented effectively and are suitable to achieve the organization’s policy and objectives (AS/NZS 4804: 2001).

Documentation may include
- statutory licences
- results of monitoring or testing
- recommendations
- compliance assessment forms
- action planning documents.

Legislative requirements may include:
- requirements for the maintenance of records for statutory/legal breaches
- provision of information and training
- regulations and codes of practice relating to statutory/legal compliance
- site representatives and committees
- issue resolution.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to establish the statutory compliance management system appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective establishment of the statutory compliance management system appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. establishing policies, objectives, structures and the framework for the statutory compliance management system
  b. identifying, interpreting and communicating technical aspects of statutory compliance management
  c. identifying and allocating statutory compliance management responsibilities
  d. establishing information and training processes to support the statutory compliance management system
  e. planning and facilitating the implementation of the statutory compliance management system
  f. auditing and modifying the statutory compliance management system
  g. coordinating and monitoring actions and responding to changing situations.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal
with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- organisation’s policies, goals and objectives
- relevant legislative requirements
- action planning methods
- advanced negotiation skill
- advanced written and oral communication methods
- receptive listening skills
- human resource management processes
- methods of identifying appropriate action based on cost, safety, and welfare issues
- work procedure/instruction writing
- reporting and recording procedures
- mine operating procedures
- hazard identification processes
- risk assessment processes
- risk treatment processes
- documentation methods.

**Required Skills**

Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- read, interpret and apply legislation
- develop and maintain procedures and policies
- read, interpret, apply and communicate technical information, rules, procedures, regulations
- facilitate and document management planning
- maintain relevant records and documents
- monitor and decide on changes to process
- provide leadership and guidance for group activities
- communicate effectively in the workplace
- explain complex information to superiors/subordinates
- provide coaching and mentoring support
- apply active listening
- show sensitivity to the needs and feelings of others
- actively encourage the free exchange of information.

**Assessment and Interdependence of Units**

This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**

There are no pre-requisite units for this unit.

**Resource Implications**

Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.
Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1103A Implement and maintain management systems to control risk

Unit Descriptor
This unit covers the use of appropriate measures and criteria to implement and maintain management systems to control risk in the area of managerial responsibility in mine site operations. It includes establishing the processes to support the system; planning and implementation the system; monitoring, reviewing and updating the management processes.

The areas of managerial responsibility covered by this may include:
- statutory compliance
- occupational health and safety
- environment
- quality
- property security
- business risks, such as;
  - credit management
  - capital expenditure
  - sales and marketing
  - finance and accounting.

Units Replaced
This unit replaces the following units:
- MNQQM01A Implement and maintain statutory/legal compliance system
- MNQQM02A Implement and maintain site risk management processes associated with occupational health and safety and environment systems
- MNQQM08A Implement and promote quality system.

Links outside this unit:
The work described in this unit is equivalent to that in MNQGEN500 Implement and maintain management systems to control risk.

The work in this unit relates to AS/NZS 4360:1999 Risk Management.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
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<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Develop and document site objectives in the area of managerial responsibility, in consultation with relevant personnel, and conforming to the organisation’s policy and system’s procedures.</td>
</tr>
<tr>
<td>1.1</td>
<td>Develop and document the structures for the application of the management system, in consultation with relevant personnel, and conforming to the organisation’s policy and system’s procedures.</td>
</tr>
<tr>
<td>1.2</td>
<td>Define, allocate and document the responsibilities for applying the management system in job descriptions</td>
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</tbody>
</table>
and duty statement for all relevant site positions.
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<tr>
<th></th>
<th>Develop the processes to support the site management system.</th>
<th>2.1 Identify existing and potential site hazards and risks in the area of managerial responsibility in accordance with legislation, codes of practice and trends identified from the record system.</th>
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<td>2.2 Access, interpret and clarify the organisation’s criteria for assessing and treating risks.</td>
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<td>2.3 Develop and document detailed site procedures and practices for the application of the management system in consultation with relevant personnel, and that conform to the organisation’s policy and system’s procedures.</td>
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<td>2.4 Identify, obtain and maintain information sources and expert advice required to support the management system.</td>
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<tr>
<td></td>
<td>Plan and implement the system.</td>
<td>3.1 Plan, schedule and document how the management systems will be introduced to the entire work site.</td>
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<td></td>
<td>3.2 Identify, seek and/or provide resources for the operation of the management system, in a timely and consistent manner.</td>
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<td>3.3 Provide and explain information on the site management system in a form readily accessible to site employees.</td>
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<td>3.4 Provide/arrange appropriate development and/or training for site personnel on the management systems’ site procedures and practices.</td>
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<td>3.5 Make available information on known and intended process changes and enhancements to site personnel.</td>
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<td>3.6 Provide support and encouragement to those responsible for the detailed system activities.</td>
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<td></td>
<td>3.7 Ensure all management systems’ records and reports are produced, processed and maintained as specified by legislative and organisation’s requirements.</td>
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<tr>
<td></td>
<td>Monitor, review and update the management processes.</td>
<td>4.1 Monitor the management systems’ activities and achievement targets and provide/focus resources to ensure the implementation plan is satisfied.</td>
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<tr>
<td></td>
<td></td>
<td>4.2 Review and update the management systems’ implementation plan periodically and when changing circumstances are anticipated/occur.</td>
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</tbody>
</table>
4.3 Complete and retain management system documentation covering the reasons for and changes made in accordance with the organisation and relevant legislative requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. The organisation’s procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Risk is the chance of something happening that will have an impact upon objectives. It is measured in terms of consequence and likelihood.

Mine site also covers quarrying and other extractive industries operations, refining and smelting operations.

Consultation with relevant personnel would typically include:
- senior management
- subject matter experts
- regulatory authorities
- tenderers
- project managers
- contractors
- employees
- community
- customers
- suppliers.

The policy is the statement of over all intent and direction of the organisation in respect of the specific area of managerial responsibility.

The system’s procedures are the procedures that support and expand on the policy and set out the requirements for implementing the system on individual sites. They provide direction and guidance to those responsible for implementation of the system and in the preparation of site specific work procedures, instruction and practices to put the system into effect.

System’s procedures may include:
- identification of hazards
- risk identification
- risk assessment
- risk treatment
- interim solutions
- dealing with unplanned incidents and events
- consultation
- communication
- monitoring
• review
• record keeping
• reporting
• training.

Hazards are sources of potential harm or situations with the potential to cause loss.

Risk identification is the process of determining what can happen, why and how.

Risk assessment is the overall process of risk analysis and risk evaluation.

Risk analysis is a systematic use of available information to determine how often specified events may occur and the magnitude of their likely consequences.

Risk evaluation is the process used to determine risk management priorities by comparing the level of risk against predetermined standards, target risk levels or other criteria.

Risk treatment is the selection and implementation of appropriate options for dealing with risk. Risk treatment should be considered using options in sequence from eliminating the hazard, substitution, engineering controls, administrative controls, and finally PPE.

Site procedures and practices may include:
• standard operating procedures
• safe operating procedures
• work instructions
• emergency procedures
• allocation of responsibilities
• permit requirements
• sampling and testing requirements
• documentation and reporting requirements.

Resources may include:
• people
• finance
• equipment
• buildings/facilities
• technology
• information.

Site personnel may include:
• employees
• contractors.

Records and reports may include
• results
• recommendations
• assessment forms
• action planning documents, etc.
Monitor is to check, supervise, observe critically, or record the progress of an activity, action or system on a regular basis in order to identify change.

Legislative requirements may include:
- requirements for the maintenance of records for statutory/legal breaches
- provision of information and training
- regulations and codes of practice relating to statutory/legal compliance
- site representatives and committees
- issue resolution.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to implement and maintain management systems to control risk appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective implementation and maintaining management systems to control risk appropriate to a mine site operations, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. developing site specific objectives and structures for the management system
  b. identifying, interpreting and communicating technical aspects of the management system
  c. identifying and allocating management system responsibilities
  d. establishing information and training processes to support the management system
  e. plan and facilitate the implementation of the management system
  f. monitor, review and modify the management system
  g. coordinate and monitor actions and respond to changing situations.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- organisation’s policies, goals and objectives
- relevant legislative requirements
- action planning methods
- negotiation skill
- written and oral communication methods
- receptive listening skills
- human resource management processes
- methods of identifying appropriate action based on cost, safety, and welfare issues
- work procedure/instruction writing
- reporting and recording procedures
- mine operating procedures
- hazard identification processes
• risk assessment processes
• risk treatment processes
• documentation methods.

**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

• read, interpret and apply legislation
• develop and maintain site procedures and practices
• read, interpret, apply and communicate technical information, rules, procedures, regulations etc
• document and facilitate management planning
• maintain relevant records and documents
• monitor and decide on changes to process
• provide leadership and guidance for group activities
• communicate effectively in the workplace
• explain complex information to superiors/subordinates
• provide coaching and mentoring support
• apply active listening
• show sensitivity to the needs and feelings of others
• actively encourage the free exchange of information.

**Assessment and Interdependence of Units**
• This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.
Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1105A  Apply the mine occupational health and safety management plan

Unit Descriptor
This unit covers the application of the Occupational Health and Safety Management Plan in work carried out in a mine.

Units Replaced
This is a new unit but relates to MNCG1107A Establish and maintain the mine Occupational Health and Safety Management System.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

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<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
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<tbody>
<tr>
<td>1</td>
<td>Identify and interpret the requirements of the Occupational Health and Safety Management Plan.</td>
</tr>
<tr>
<td>1.1</td>
<td>Identify and interpret the legislative and site requirements related to the Occupational Health and Safety Plan.</td>
</tr>
<tr>
<td>1.2</td>
<td>Access, interpret and clarify the Occupational Health and Safety Plan.</td>
</tr>
<tr>
<td>1.3</td>
<td>Identify and clarify roles and responsibilities, as specified in the Occupational Health and Safety Plan and communicate and clarify individual responsibilities and tasks to relevant personnel.</td>
</tr>
<tr>
<td>1.4</td>
<td>Identify, obtain and allocate resources and equipment required for the application of the Occupational Health and Safety Plan.</td>
</tr>
<tr>
<td>1.5</td>
<td>Identify individual training needs.</td>
</tr>
<tr>
<td>1.6</td>
<td>Identify, report and review the major hazards at the mine site in accordance with the Occupational Health and Safety Plan and review established procedures.</td>
</tr>
<tr>
<td>1.7</td>
<td>Determine appropriate controls for hazards in accordance with the Occupational Health and Safety Plan and develop risk control measures in accordance with the Occupational Health and Safety Plan.</td>
</tr>
<tr>
<td>1.8</td>
<td>Identify potential safety, health or hygiene risks in accordance with the Occupational Health and Safety Plan.</td>
</tr>
<tr>
<td>2</td>
<td>Apply Occupational Health and Safety Plan.</td>
</tr>
<tr>
<td>2.1</td>
<td>Determine requirements of the Occupational Health and Safety Plan as applied to the mine site.</td>
</tr>
<tr>
<td>2.2</td>
<td>Assess and communicate the nature and scope of the incident in accordance with the emergency plan.</td>
</tr>
<tr>
<td>2.3</td>
<td>Prepare an action plan in consultation with relevant personnel.</td>
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</tbody>
</table>
work team members to maintain health and safety in accordance with the Occupational Health and Safety Plan.
2.4 Apply and monitor occupational health and safety plans and procedures in accordance with the Occupational Health and Safety Plan.

2.5 Apply procedures for monitoring, recording and reporting on hazards in accordance with the Occupational Health and Safety Plan.

3.1 Monitor the application of health and safety procedures and control measures in accordance with the Occupational Health and Safety Plan.

3.2 Monitor the activities of the work group in relation to any major hazards identified at the mine site.

3.3 Monitor the use, effectiveness and appropriateness of safety procedures including adequate Personal Protection Equipment, systems and measures.

3.4 Monitor systems and procedures for manual and assisted handling.

3.5 Monitor the health aspects relevant to work activities and requirements.

3.6 Monitor adequacy of control measures and revise where necessary.

3.7 Action or recommend changes to improve the health and safety aspects of the job.

3.8 Investigate and report any accident or near miss.

3.9 Maintain OH&S records of work injury, incidents, health and hygiene issues in accordance with OH&S System and Plan and relevant legislation.

3.10 Report OH&S issues which need resolving by others.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

**Interpret** is defined as: the understanding needed by the person within their job role.

**Hazard** is defined as: *a source of potential harm or a situation with a potential to cause loss* (definition from AS/NZS 4360:1999 Risk Management).

**Risk** is defined as: *the chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood* (definition from AS/NZS 4360:1999 Risk Management).
Mine Occupational Health & Safety (OH&S) system and plan should be available for each mine. This would outline the system of managing the mine to ensure it can be operated safely and specific plans to control any established hazards.

Resources and materials may include:
- selection and purchasing procedures
- material safety data sheets (MSDS)
- risk assessment leading to standard operating procedures or plant mods
- health and safety audits
- training requirements for competency to operate
- maintenance procedures.

Major hazards in mines may include:
- explosives and blasting
- potential for slope instability
- potential for fire or flooding
- potential for major machinery collapse
- health concerns, eg relating to specific materials being mined
- safety concerns, eg relating to the method of mining, material properties.

Safety, health and hygiene risks may include:
- shift work and lack of sleep resulting in fatigue
- sanitation and hygiene requirements, including:
  - potable water
  - cleanliness and sanitation
  - vermin control and eradication
- chemical and hazardous materials, including:
  - industrial chemicals
  - diesel, oils, hydraulic oils
  - asbestos
  - explosives
- dust control methods, including:
  - asthma, silicosis, asbestosis and other diseases of the lung
  - monitoring and analysis of dust,
  - dust control systems include filters, isolation, personnel protective equipment
- mine transport networks and rules, including:
  - route
  - traffic rules
  - signage and barriers
- personal protection, including those for:
  - hearing
  - eyes (industrial, radiation, ultra-violet, infra-red radiation, dust)
  - respiratory protective devices
  - hand, head, hair, feet
  - protective clothing
  - safety belts and harnesses
  - safety signs.
Stress and stressors
- drugs may, including:
  - alcohol, nicotine
  - prescription drugs
  - illicit drugs and substances
  - impact of drugs on fitness for work
- vibration hazards resulting from:
  - hand operated equipment
  - drilling equipment
  - corrugated roads
  - springs and seating
- noise management controls
- heat/cold exposure protection.

Records of injury, incidents, health and hygiene issues may include:
- classification (injury, fatal injury, work days lost, employees, time frames etc)
- reporting parameters
- statutory reporting requirements
- investigation outcomes.
- employee rehabilitation programs.

Controls for hazards may include:
- elimination — remove activity, engineering out hazards
- substitution — use less hazardous materials, substances or processes
- separation — isolate hazards from person by guarding, space or time separation
- administration — adjusting the time or conditions of risk exposures
- training — improving competency making tasks less hazardous to perform
- personal protective equipment — (used as last resort) appropriately designed and properly fitted equipment to allow safety and health to be maintained in carrying out duties where there is some risk from exposure.

Training may include:
- induction
- competency training for work activities
- safety meetings
- involvement in defining work procedures
- tool box talks and circular updating safety information
- safety training sessions
- input into work procedures or mine development plans
- safety, health and hygiene inspections.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
• knowledge of procedures, requirements and instructions to apply the mine occupational health and safety management plan appropriate to a mine site
• implementation of appropriate procedures and techniques for the efficient and effective application of the mine occupational health and safety management plan appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. interpreting and communicating information on health and hygiene matters
  b. identifying, explaining and responding to the fundamentals of human disease and injury
  c. identifying, explaining, anticipating and responding to situations involving stress, shiftwork effects and drug and substance abuse
  d. identifying, anticipating and responding to health and hygiene hazards
  e. applying and monitoring health and hygiene measures within mining and operational infrastructure, planning and management processing
  f. applying and monitoring health and hygiene measures within the mine’s management and maintenance systems and procedures
  g. applying and monitoring health and hygiene measures within safety hazard management plans and processes
  h. applying and monitoring the mine’s health and hygiene training systems and programs.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
• legislative and industry OH&S standards and compliance requirements
• appropriate work processes
• appropriate health and hygiene standards
• hazard identification and risk management
• observation and inspection methods
• potential impacts of drug and substance abuse on fitness for work
• personnel protective equipment and measures
• manual handling codes and practices
• mine hazards associated with:
  - hazardous substances, dusts, noise, vibration
  - the mining processes
  - explosives (where used)
  - high-wall/low-wall failure and water ingress
  - mining equipment and haul roads
• emergency procedures
• plant isolation techniques
• conventional signage techniques.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
• access, interpret and apply technical information
• communicate ideas and information
• plan and organise activities
• prepare and document procedures in a system
• apply and monitor mine site procedures and systems
• apply risk management processes and techniques
• conduct enquiries/investigations and prepare reports
• access, evaluate and apply data from monitoring systems and equipment / plant
• work with others and in teams
• identify health & hygiene training needs
• apply review and audit processes and techniques.

**Assessment and Interdependence of Units**
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

**Pre-requisite units**
There are no pre-requisite units for this unit.

**Resource Implications**
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.
Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1107A Establish and maintain the mine Occupational Health and Safety management system

Unit Descriptor
This unit covers the establishment and management of the Occupational Health and Safety Management System in a mining organisation. Its application is to ensure the workplace is, so far as is reasonably achievable, safe and without risks to the health of employees. The safety system may also be known as the Safety and Health Management System.

Units Replaced
This unit replaces part of the unit:
- MNIC09A Establish and manage the mine OH&S system.

Links outside this unit
The work covered in this unit is equivalent to that covered in unit MNQGEN610 Establish and maintain the Occupational Health and Safety Management System.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT PERFORMANCE CRITERIA

1 Establish and maintain the framework for the Occupational Health and Safety system.

1.1 Develop Occupational Health and Safety policies, objectives and procedures that clearly express the organisation’s commitment with respect to Occupational Health and Safety, and how relevant Occupational Health and Safety legislation will be implemented, consistent with overall organisational policies.

1.2 Clearly define, allocate and include in job descriptions and duty statements for all relevant positions Occupational Health and Safety responsibilities and duties, which will allow implementation and integration of the Occupational Health and Safety Management System.

1.3 Identify, seek and/or provide in a timely and consistent manner financial and human resources for the operation of the Occupational Health and Safety Management System.

1.4 Provide and explain information on the Occupational Health and Safety Management System and procedures in a form that is readily accessible to employees.

2 Establish and maintain participative arrangements for the

2.1 Establish and maintain appropriate consultative processes in consultation with employees and their representatives in accordance with relevant
2.2 Ensure issues raised through participation and consultation are dealt with and resolved promptly and effectively in accordance with procedures for issue resolution.

2.3 Ensure that information about the outcomes of participation and consultation is provided in a manner accessible to employees.

3 Establish and maintain procedures for identifying hazards.

3.1 Develop, maintain and ensure integration of a procedure for ongoing identification of existing and potential hazards with systems of work and procedures.

3.2 Monitor activities to ensure that hazard identification procedure is adopted effectively throughout the organisation.

3.3 Ensure procedures are in place and apply for hazard identification at the planning, design and evaluation stages of any change in the workplace to ensure that new hazards are not created.

4 Establish and maintain procedures for assessing risk.

4.1 Ensure appropriate assessment of risks presented by identifying hazards is carried out in accordance with the Occupational Health and Safety legislation and codes of practice.

4.2 Develop and ensure integration of a procedure for ongoing assessment of risks within systems of work and procedures.

4.3 Monitor activities to ensure that risk assessment procedure is adopted effectively throughout the organisation.

4.4 Ensure procedures are in place for risk assessment to be addressed at the planning, design and evaluation stages of any change within the organisation to ensure that risks are not created.

5 Establish and maintain procedures for treating risks.

5.1 Develop and ensure implementation of measures to control assessed risks in accordance with relevant Occupational Health and Safety legislation, codes of practice and trends identified from the Occupational Health and Safety records system.
### 5.2 Ensure the implementation of interim solutions until a permanent control measure is developed when measures which treat a risk at its source are not immediately practicable.

### 5.3 Develop and ensure integration of procedures for ongoing control of risks within general systems of work and procedures.

### 5.4 Monitor activities to ensure that the risk treatment procedure is adopted effectively throughout the organisation.

### 5.5 Ensure risk treatment is addressed at the planning, design and evaluation stages of any change within the organisation to ensure that adequate risk control measures are included.

### 5.6 Identify inadequacies in existing risk treatment measures and seek and provide resources to enable implementation of new measures according to appropriate procedures.

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<th>6</th>
<th>Establish and maintain organisational procedures for dealing with unplanned incidents.</th>
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<td>6.1</td>
<td>Identify the range of most likely potential unplanned incidents from an analysis of likely risks.</td>
</tr>
<tr>
<td>6.2</td>
<td>Develop procedures in consultation with appropriate emergency services that would treat the risks associated with the potential events that meet legislative requirements as a minimum.</td>
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<tr>
<td>6.3</td>
<td>Provide appropriate information and training to all employees to enable implementation of the correct procedures in all relevant circumstances.</td>
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<tr>
<th>7</th>
<th>Establish and maintain an Occupational Health and Safety training program.</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1</td>
<td>Develop and ensure implementation of an Occupational Health and Safety training program to identify and fulfil employees’ Occupational Health and Safety training needs.</td>
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<tr>
<th>8</th>
<th>Establish and maintain a system for Occupational Health and Safety records.</th>
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</thead>
<tbody>
<tr>
<td>8.1</td>
<td>Establish and monitor the system for keeping Occupational Health and Safety records to allow identification of patterns of occupational injury and disease within the organisation.</td>
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<tr>
<th>9</th>
<th>Plan and prepare for the implementation of the mine occupational health and safety management system.</th>
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</thead>
<tbody>
<tr>
<td>9.1</td>
<td>Identify and interpret the legislative and site requirements related to the occupational health and safety management system.</td>
</tr>
</tbody>
</table>
9.2. Access and interpret the occupational health and safety management system.

9.3. Identify, clarify and communicate to all personnel roles and responsibilities, as specified in the occupational health and safety management system.

9.4. Identify, forecast, obtain and allocate/schedule resources required for the implementation of the occupational health and safety management system.

9.5. Implement occupational health and safety management training program.

9.6. Encourage, receive, review and, where appropriate, implement suggestions and recommendations for changes to occupational health and safety management procedures.

10.1. Assess the effectiveness of the mine’s Occupational Health and Safety Management System and related policies, procedures and programs in accordance with the organisation’s goals and objectives and statutory requirements.

10.2. Develop and ensure implementation of improvements to the Occupational Health and Safety Management System to ensure more effective achievement of the organisation’s aims with respect to Occupational Health and Safety.

10.3. Assess compliance with Occupational Health and Safety legislation and codes of practice to ensure that legal Occupational Health and Safety standards are maintained as a minimum.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Safety is a state in which the risk of harm to persons or damage is limited to an acceptable level.

Occupational Health and Safety Management System (OHSMS) is that part of the overall management system which includes organisational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the OHS policy, and so managing the OHS risks associated with the business of the organisation.
**Occupational Health and Safety policy** is a statement by the organisation of its intentions and principles in relation to its overall Occupational Health and Safety performance which provides a framework for action and for the setting of its Occupational Health and Safety objectives and targets.

**Occupational health and safety objectives** are goals in terms of OHS performance, arising from the Occupational Health and Safety policy that an organisation sets itself to achieve, and which are quantified where practicable.

**Relevant positions for implementing the Occupational Health and Safety Management System** will include:
- managers
- supervisors
- Occupational Health and Safety officer/manager
- first aid officers.

**Responsibility** is being accountable for the achievement of objectives.

**Occupational Health and Safety Management System** principles are to include:
- commitment and policy
- planning
- implementation
- measurement and evaluation
- review and improvement.

**Processes for consultation** may include:
- Occupational Health and Safety committees
- consultation with health and safety representatives
- issue resolution procedures
- participative/consultative procedures conducted by supervisory staff within the area of managerial responsibility.

**Monitoring of activities** may include:
- review of written reports
- performance appraisal
- auditing procedures.

**Hazard** is defined as: *a source of potential harm or a situation with a potential to cause loss* (definition from AS/NZS 4360:1999 *Risk Management*).

**Hazard identification** is the process of recognising that a hazard exists and defining its characteristics.

**Existing and potential hazards** can be identified from:
- checklists
- hazard identification processes
- accident and incident reports
- significant incident reports.
Risk is defined as: the chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood (definition from AS/NZS 4360:1999 Risk Management).

Risk management is defined as: the culture, processes and structures that are directed towards the effective management of potential opportunities and adverse effects (definition from AS/NZS 4360:1999 Risk Management).

Risk assessment is defined as: the overall process of risk analysis and risk evaluation (definition from AS/NZS 4360:1999 Risk Management).

Risk control is defined as: that part of risk management which involves the implementation of policies, standards, procedures and physical changes to eliminate or minimize adverse risks (definition from AS/NZS 4360:1999 Risk Management).

Risk acceptance is defined as: an informed decision to accept the consequences and the likelihood of a particular risk (definition from AS/NZS 4360:1999 Risk Management). The criteria for acceptability of risks must be determined by the organisation’s internal policy, goals and/or objectives.

Incident is any unplanned event resulting in, or having a potential for injury, ill health, damage or other loss.

Relevant statutory/legal requirements may include:
- maintenance of records for statutory/legal breaches
- provision of information and training
- regulations and codes of practice relating to statutory/legal compliance
- site representatives and committees
- issue resolution.

Legislative compliance will typically involve:
- mines department/mineral resources or appropriate body
- safety and health legislative body
- environmental authority
- state/federal/local government authorities
- emergency services.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to establish and maintain the mine OH&S management system appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective establishment and maintenance of the mine OH&S management system appropriate to a
mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:

a. applying personal and operational safety and health procedures
b. interpreting and communicating information on health and safety management
c. establishing the Occupational Health and Safety Management System
d. integrating the Occupational Health and Safety Management System with other management systems
e. defining roles and responsibilities for system management
f. establishing reviewing statutory reporting procedures
g. establishing and reviewing the competency training programs
h. monitoring the implementation of the system
i. auditing and reviewing the effectiveness of the mine Occupational Health and Safety Management Systems
j. applying continuous improvement processes.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- occupational health and safety legislation, policies and codes of practice
- occupational health and safety auditing
- statutory/legal control
- duty of care
- training design and management
- emergency procedures
- strategic planning
- human resource management
- statutory and site rules, policies, procedures and regulations
- risk management processes and techniques
- action planning methods
- continuous improvement processes
- company policies.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- access and analyse archival and historical information related to the mine safety matters
- access, interpret and apply technical occupational health and safety information
- apply and manage research techniques and activities
- audit occupational health and safety systems and recommend strategies for improvement
- communicate effectively in the workplace
- develop and introduce practices to improve the work environment
- develop and maintain risk management procedures and policies
- develop and maintain statutory/legal and organisational policies and procedures
- explain complex information to superiors/subordinates
- maintain relevant records and documents
• monitor and decide on changes to process
• provide coaching and mentoring support
• take a leading role in initiating action and making decisions
• use effective consultative mechanisms to negotiate processes and procedures appropriate to workplace safety.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
• observation of processes and procedures
• oral and/or written questioning on required knowledge and skills
• testimony from supervisors, colleagues, clients and/or other appropriate persons
• inspection of the final product or outcome
• a portfolio of documentary evidence
• simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons. Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1111A Establish and maintain the quality system

Unit Descriptor
This unit covers the establishment of quality systems for a mining organisation. The unit includes the requirements for designing, implementing and maintaining the framework for the quality system; participative arrangements for the management of quality; procedures for identifying and assessing quality issues; designing quality treatment measures; and evaluating the organisation’s quality system and related policies, procedures and programs.

Units Replaced
This unit replaces the unit:
- MNQSM08A Design, implement, maintain & evaluate quality systems.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Establish and maintain the framework for the quality system.</td>
</tr>
<tr>
<td>1.1</td>
<td>Develop, document and have approved the environmental policy and system procedures that clearly express the organisation’s commitment to quality, consistent with the organisation’s strategic goals.</td>
</tr>
<tr>
<td>1.2</td>
<td>Clearly define, allocate and include responsibilities and duties that will allow implementation and integration of the quality system in job descriptions and duty statements for all relevant positions.</td>
</tr>
<tr>
<td>1.3</td>
<td>Identify, source and/or provide the resources for the operation of the quality system in a timely and consistent manner.</td>
</tr>
<tr>
<td>1.4</td>
<td>Provide and explain information on the quality system and procedures for the area of responsibility in a form that is readily accessible to employees.</td>
</tr>
<tr>
<td>2</td>
<td>Establish and maintain participative arrangements.</td>
</tr>
<tr>
<td>2.1</td>
<td>Establish and ensure the maintenance of appropriate consultative processes, in consultation with employees and their representatives, consistent with the organisation’s overall process for consultation.</td>
</tr>
<tr>
<td>2.2</td>
<td>Ensure issues raised through participation and consultation are dealt with and resolved promptly and effectively in accordance with procedures for issue resolution.</td>
</tr>
<tr>
<td>2.3</td>
<td>Ensure information about the outcomes of participation and consultation is provided in a manner accessible to employees.</td>
</tr>
</tbody>
</table>
### Establish and maintain procedures for identifying and assessing quality issues.

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Ensure existing and potential <em>quality issues</em> are identified and confirmed in accordance with organisational policy and procedures and trends identified from the quality records system.</td>
</tr>
<tr>
<td>3.2</td>
<td>Develop and maintain <em>system procedures</em> for the ongoing identification of existing and potential <em>quality issues</em> and ensure the implementation of these procedures in site procedures and systems of work.</td>
</tr>
<tr>
<td>3.3</td>
<td>Monitor activities to ensure that the procedure for ongoing identification of quality issues is adopted effectively throughout the organisation.</td>
</tr>
<tr>
<td>3.4</td>
<td>Ensure procedures are in place and applied at the planning, design and evaluation stages, of any change in the workplace to determine if any new quality system requirements are to be created.</td>
</tr>
</tbody>
</table>

### Design procedures for treatment of quality issues.

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Develop and ensure implementation of <em>system procedures</em> to treat quality in accordance with legislation, codes of practice and trends identified from the quality records system.</td>
</tr>
<tr>
<td>4.2</td>
<td>Develop and ensure the implementation of <em>system procedures</em> for applying interim solutions until permanent treatment measures are developed, when measures to treat quality issues at their source are not practical.</td>
</tr>
<tr>
<td>4.3</td>
<td>Develop and ensure the implementation of a <em>system procedure</em> for ongoing treatment of the quality system within site procedures and general systems of work, based on the hierarchy of control.</td>
</tr>
<tr>
<td>4.4</td>
<td>Monitor activities to ensure that control procedures are adopted effectively throughout the organisation.</td>
</tr>
<tr>
<td>4.5</td>
<td>Identify inadequacies in existing <em>treatment</em> measures and seek and provide resources to enable implementation of new measures, in accordance with appropriate procedures.</td>
</tr>
<tr>
<td>4.6</td>
<td>Develop and ensure implementation of training programs to identify and fulfil employees’ quality training needs as part of the organisation’s general training program.</td>
</tr>
</tbody>
</table>

### Evaluate the organisation’s quality system.

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>Assess the effectiveness of the <em>quality system</em> and related <em>policies</em>, procedures and programs in achieving the organisation’s aims.</td>
</tr>
</tbody>
</table>
5.2 Develop and ensure implementation of improvements to the quality system to ensure more effective achievement of the organisation’s aims.

5.3 Assess compliance with legislation and codes of practice to ensure that legal requirements are maintained, as a minimum.
RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Quality system may include:
- quality policy
- quality system and site procedures
- site-specific work instructions
- consultative processes
- product specifications
- service standards.

Quality policy is the statement by the organisation of its intentions and principles in relation to its overall quality performance that provides a framework for action and for the setting of its quality objectives and developing its procedures.

The system procedures are the procedures that support and expand on the policy and set out the requirements for implementing the system on individual sites. They provide direction and guidance to those responsible for implementation of the system and in the preparation of site specific work procedures, instruction and practices to put the system into effect.

System procedures may include:
- allocation of responsibilities and duties
- identification of quality issues
- treating quality issues
- interim solutions
- dealing with unplanned incidents and events
- consultation
- communication
- monitoring
- review and improvement of the system
- assessment of compliance
- record keeping
- reporting
- training.

Relevant positions may include:
- managers
- supervisors
- quality officer/manager
- laboratory personnel
- all mine site personnel.

Resources may include:
- people
- finance
- buildings/facilities
• technology
• information.

Consultation may include:
• environmental committees
• consultation with environmental and laboratory personnel
• issue resolution procedures
• participative/consultative procedures conducted by supervisory staff.

Quality issues are sources of potential harm or a situation with the potential to cause loss, including:
• product specification or defects
• delivery requirements
• customer service expectations.

Existing and potential quality issues can be identified from:
• product testing
• site inspections
• checklists
• quality issues identification processes
• non-compliance reports
• customer feedback
• sales staff feedback.

Monitoring may include:
• review of written reports
• performance appraisal
• auditing procedures.

Quality issues treatment is the selection and implementation of appropriate options for dealing with the existing or potential issue.

Legislation requirements may include:
• maintenance of records for statutory/legal breaches
• provision of information and training
• regulations and codes of practice relating to statutory/legal compliance
• site representatives and committees
• issue resolution.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
• knowledge of procedures, requirements and instructions to establish and maintain the quality system appropriate to a mine site
implementation of appropriate procedures and techniques for the efficient and effective establishment and maintenance of the quality system appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:

a. developing, documenting, resourcing and ensuring the quality system is implemented on operational sites
b. monitoring and improving the implementation of the quality system.

**Required Knowledge**
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- quality system principles and practice
- best practice principles and techniques
- industry quality benchmarks
- information collection and review techniques
- organisational:
  - reporting requirements
  - resource acquisition processes
  - operations
  - products and services
  - plant and equipment
- problem solving techniques
- team management techniques
- consultative and participative processes
- continuous improvement principles
- organisational strategic and quality objectives
- fundamentals of contract law
- human resource policies and practices
- risk management, principles, strategies and applications
- customer/client relations techniques
- organisational change and development processes
- computer applications
- negotiation techniques
- statistics.

**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- design quality work procedures and practices
- develop business plans
- develop resource plans
- manage systems implementation projects and tasks
- co-ordinate resources – human, financial and physical
- audit the systems’ performance
- implement change
- access and use appropriate technologies
• negotiate with internal/external customers, community and statutory/legal authorities
• resolve conflict
• communicate ideas and information.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
• observation of processes and procedures
• oral and/or written questioning on required knowledge and skills
• testimony from supervisors, colleagues, clients and/or other appropriate persons
• inspection of the final product or outcome
• a portfolio of documentary evidence
• simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
**MNCG1113A Apply quality management system**

**Unit Descriptor**
This unit covers the quality management responsibilities of an employee with supervisory responsibilities in a mine site operation. It includes the requirements for implementing quality processes; monitoring, adjusting and reporting of performance; and the consolidation of opportunities for further improvement of the quality system.

**Units Replaced**
This unit replaces the units:
- MNQTL08A Implement and monitor quality systems

**Links outside this unit**
The work described in this unit covers the work in unit MNQGEN430 Apply site quality plan.

**Employability Skills**
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Implement quality processes.</td>
</tr>
<tr>
<td>1.1</td>
<td>Actively encourage and support team members to participate in the <em>site quality plan</em> decision making processes and to assume responsibility and authority.</td>
</tr>
<tr>
<td>1.2</td>
<td>Provide information on the <em>site quality plan</em> in a language, style and format that is understood by <em>site personnel</em>.</td>
</tr>
<tr>
<td>1.3</td>
<td>Ensure that mentoring and coaching support is provided to individuals/teams to enable them to implement the <em>site quality plan</em>.</td>
</tr>
<tr>
<td>1.4</td>
<td>Ensure that site quality requirements are applied in the implementation of other site processes and procedures.</td>
</tr>
<tr>
<td>2</td>
<td>Monitor, adjust and report performance.</td>
</tr>
<tr>
<td>2.1</td>
<td>Use the organisations systems and technology to <em>monitor</em> progress and to identify ways in which planning and operations could be improved.</td>
</tr>
<tr>
<td>2.2</td>
<td>Use quality improvement techniques and processes to strengthen customer service.</td>
</tr>
<tr>
<td>2.3</td>
<td>Identify and recommend adjustments to the <em>site quality plan</em> to relevant personnel and apply approved adjustments.</td>
</tr>
<tr>
<td>3</td>
<td>Consolidate opportunities for further</td>
</tr>
<tr>
<td>3.1</td>
<td>Inform individuals/teams of savings and productivity improvements in achieving the <em>site quality plan</em>.</td>
</tr>
</tbody>
</table>
improvement.

3.2 Document work performance and use the information to identify opportunities for further improvement of quality.

3.3 Manage quality records, reports and recommendations for improvement in accordance with the site quality plan requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Mine site also covers quarrying, refining and smelting operations.

Site quality plan may include:
• organisation’s quality policy
• allocation of responsibilities
• consultation procedures
• procedures and requirements for:
  - communication
  - monitoring
  - review
  - record keeping
  - reporting
  - training
  - dealing with non-compliance
  - applying interim solutions
  - sampling and testing
  - documentation and reporting
• standard operating procedures
• safe operating procedures
• work instructions
• emergency procedures
• permit requirements
• product specifications
• delivery standards
• customer service standards
• Australian Standards.

Site personnel may include:
• employees
• contractors.

Monitor is to check, supervise, observe critically or record the progress of an activity, action or system on a regular basis in order to identify change.

EVIDENCE GUIDE
Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to apply quality management system appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective application of quality management system appropriate to a mine site, while complying with site risk control, health, safety, environmental and communication requirements. This will include:
  a. involving all relevant site personnel in the implementation of the site quality plan and
  b. identifying and recommending improvements to the site quality plan.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- statutory/legal control
- key aspects of the organisation’s quality system
- the site quality plan procedures and requirements
- human resource management
- continuous improvement processes
- quality plan monitoring and review procedures and processes.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
- promote and monitor quality processes
- gain the commitment of individuals/teams to quality principles and practices
- encourage ideas and feedback from other team members in developing and refining processes
- use available technology to monitor and review performance
- apply effective problem identification and problem solving techniques
- initiate quality processes to enhance the quality of individual and team performance
- maintain a focus on quality performance in achieving outcomes acceptable to customers.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Prerequisite units
There are no prerequisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

**Consistency in Performance**
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

**Context for Assessment**
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1116A Establish mine emergency preparedness and response systems

Unit Descriptor
This unit covers the use of appropriate measures and criteria to establish the mine emergency preparedness and response systems. Its application provides for the strategic management functions required to develop and establish the mine emergency preparedness and response systems.

Units Replaced
This unit replaces the following units:
- MNIC10A Establish mine emergency preparedness and response systems.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Establish mine emergency preparedness and response systems.</td>
</tr>
<tr>
<td>1.1</td>
<td>Access, interpret and clarify the legislative, statutory and site requirements related to mine emergency preparedness and response systems.</td>
</tr>
<tr>
<td>1.2</td>
<td>Identify the requirements for and purpose of mine emergency preparedness and response systems in accordance with legislative and site requirements.</td>
</tr>
<tr>
<td>1.3</td>
<td>Design and develop the emergency preparedness plan from an analysis of all relevant technical and operational information.</td>
</tr>
<tr>
<td>1.4</td>
<td>Design and develop an organisational structure for the management of emergency preparedness and response from an analysis of all relevant technical and operational information.</td>
</tr>
<tr>
<td>1.5</td>
<td>Develop emergency response procedures for management of classes of incident from an analysis of all relevant technical and operational information.</td>
</tr>
<tr>
<td>1.6</td>
<td>Establish emergency response procedures for management of decision making processes and decision monitoring systems.</td>
</tr>
<tr>
<td>1.7</td>
<td>Review the plan with relevant stakeholders and specialists.</td>
</tr>
<tr>
<td>1.8</td>
<td>Establish a program, including systems and procedures, to satisfy identified mine emergency preparedness and response training requirements.</td>
</tr>
<tr>
<td>1.9</td>
<td>Establish procedures to audit and review mine emergency preparedness and response compliance with statutory and site requirements.</td>
</tr>
<tr>
<td>1.10</td>
<td>Establish procedures for incorporating feedback into</td>
</tr>
</tbody>
</table>
the audit/review system.
2. Establish mine emergency facilities, equipment and personnel.

2.1 Establish *incident* information receipt and recording systems in accordance with statutory and site requirements.

2.2 Establish emergency response and evacuation plans and procedures in accordance with *statutory* and site requirements.

2.3 Establish *operations* facilities including *communications* to support them in accordance with the emergency plan.

2.4 Develop action planning processes to manage the situation/ *incident* in accordance with the emergency plan.

2.5 Identify required *services*, personnel, *equipment* and *resources* for types of *incidents* in accordance with the emergency plan.

2.6 Determine and establish documentation and reporting requirements in accordance with *statutory* and site requirements.

3. Establish post-incident management procedures.

3.1 Establish plans to manage post-incident actions in accordance with *statutory* and site requirements.

3.2 Determine and establish processes to investigate nature and cause of situation/ *incident* in accordance with *statutory* and site requirements.

3.3 Determine and establish processes to evaluate the effectiveness of emergency response and action plans to achieve objectives in accordance with *statutory* and site requirements.

4. Audit and review the emergency preparedness and response plan.

4.1 *Audit* emergency preparedness and response monitoring systems for compliance with *statutory* and management plan standards.

4.2 *Audit* emergency preparedness and response processes for compliance with *statutory* and mine site requirements.

4.3 *Audit* recording systems for compliance with the emergency preparedness and response plan.

4.4 Implement emergency preparedness and response maintenance program and procedures in accordance with management plan.
4.5 *Audit* emergency preparedness and response training program for currency, relevance and compliance with the requirements of the emergency preparedness and response plan.

4.6 Respond promptly to instances of non-compliance or other discrepancies / deficiencies revealed by *audit* and the emergency preparedness and modify response plan accordingly.

5  Plan and prepare for the implementation of the emergency preparedness and response plans.

5.1 Identify and interpret the legislative, statutory and site requirements related to emergency preparedness and response management.

5.2 Access, interpret and clarify the emergency preparedness and response plans.

5.3 Identify, clarify roles and responsibilities, as specified in the emergency preparedness and response plans, and communicate them to all persons.

5.4 Identify, forecast, obtain and allocate / schedule resources required for the implementation of the emergency preparedness and response plans.

5.5 Implement the emergency preparedness and response training program.

5.6 Encourage, receive, review and, where appropriate, implement suggestions and recommendations for changes to emergency preparedness and response implementation procedures.

**RANGE STATEMENT**

The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

For the purposes of this standard, the definitions below apply:

*Audit* is a systematic examination against defined criteria to determine whether activities and related results conform to planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve the organisation’s policy and objectives.

*Mine design* is the process of engineering analysis applied to the systems and sequences involved in mining.

*Risk* is defined as: *the chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood* (definition from AS/NZS 4360:1999 *Risk Management*).
Hazard is defined as: a source of potential harm or a situation with a potential to cause loss (definition from AS/NZS 4360:1999 Risk Management).

Standard operating procedures (SOP) are also known as safe working procedures, safe operating procedures and standard working procedures.

Post-incident management is the control of activities arising from an incident and can include:
- legal advice
- environmental aspects
- critical incident stress debriefing
- interviewing
- investigations
- witness interview statements
- restoration of normal operations
- media releases
- public relations
- employee welfare and family support
- security of evidence
- liaison with statutory/legal bodies
- statutory investigations
- review of emergency procedures
- documentation of ongoing operations
- restoration of emergency preparedness.

Types of incident can be identified as, but not limited to:
- minor accident
- major accident or fatality
- underground explosion or fire
- ignition, outburst
- spontaneous combustion
- surface fire which disrupts operations
- environmental incidents
- bomb threat
- terrorist attack.

Incidents can be caused by, but are not limited to:
- explosion
- fire
- roof fall
- strata
- inrush
- outburst
- irrespirable atmosphere
- environmental incident
- Hazchem
- explosives
- vehicle accidents
• wall collapse.

**Stakeholders** can include, but are not limited to:

• board of directors
• employees
• unions
• families
• contractors
• insurance companies
• suppliers
• local community
• manufacturer
• inspectorate
• police
• Mines Rescue Service
• fire brigades
• ambulance
• medical staff
• hospitals
• critical incident stress debriefing organisations
• local emergency management organisations
• Salvation Army
• clergy
• State, Federal and local government.

Required **services and resources** can include, but are not limited to:

• internal mine services and resources
• contractors
• insurance companies
• suppliers
• local community
• manufacturer
• inspectorate
• police
• Mines Rescue Service
• fire brigades
• ambulance
• medical staff
• hospitals
• critical incident stress debriefing organisations
• local emergency management organisations
• Salvation Army
• clergy
• State, Federal and local government.

• media
• coroner’s representative
• security services
• solicitors
• district check inspector
• other mines
• experts such as engineers, scientists
• inertisation
• down-hole camera
• drill rigs
• forensic.

**Communications** can include:
• radio
• telephone
• telemetry
• verbal
• written
• computers
• runners.

**Equipment** refers to that needed to control the incident and includes but is not restricted to:
• rescue equipment
• mining equipment
• transport
• specialised equipment from external sources
• monitoring and analysis equipment.

**Media** can include:
• radio
• print media.

**Operations** facilities are those which are set up to manage an incident and can include, but are not restricted to:
• operations centre
• press room
• mortuary
• muster areas
• meeting rooms
• communications centres and networks.

Future **operations** may include, but are not limited to:
• sealing mine areas
• restoration to full production
• suspension of operations
• full closure of mine.

**Statutory/legal** compliance may include but is not limited to:
• trade practices
• weights and measures
• waterways
Workers Compensation/Workcover
planning and assessment
local government
dangerous goods
Minerals and Extractive Industry licensing
industrial relations
navigation
Mines Act
common law
development of training policies/programs to aid compliance.

Relevant statutory/legal requirements include:
- requirements for the maintenance of records for statutory/legal breaches
- provision of information and training
- regulations and codes of practice relating to statutory/legal compliance
- site representatives and committees
- issue resolution.

Management operates within:
- work schedules which may include shift work and varying hours of duty
- environments ranging from simple to complex and diverse
- appropriate policies, guidelines and processes
- a level of autonomy which may range from limited to substantial
- quality and continuous improvement processes and standards
- business and performance plans
- ethical standards established by the organisation
- productivity and profitability objectives and targets.

Management will typically make decisions to:
- maintain statutory/legal compliance
- influence operational performance
- plan production schedules
- maximise production and minimise operating costs/risks and non-conformances
- analyse and review market/production predictions and costs
- manage projects and tasks.

Resources may include, but are not limited to:
- Acts
- legislation/regulations
- information
- common law.

Negotiations may be with a variety of internal or external sources and be:
- formal or informal
- short term or ongoing
- multi-lingual and cross-cultural
- enterprise agreements
- legislation regulation compliance
• relevant authorities, project managers, employees, contractors, customers and the community.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
• knowledge of procedures, requirements and instructions to establish mine emergency preparedness and response systems appropriate to a mine site
• implementation of appropriate procedures and techniques for the efficient and effective establishment of mine emergency preparedness and response systems appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. emergency preparedness planning for mines
  b. development of emergency response procedures for management of different classes of incident
  c. the roles of stakeholders and specialists at incidents
  d. the structure and roles of on-site functions and personnel
  e. information gathering, analysis and communication
  f. action plan development and evaluation
  g. establishment of incident operations facilities
  h. incident management planning
  i. post-incident management planning
  j. auditing and reviewing emergency preparedness and response plans
  k. establishing the training component of the emergency preparedness and response plan

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
• mines rescue guidelines
• emergency response and disaster planning processes and techniques
• audit review process and techniques
• incident resources and how to access them
• legislation applicable to mines
• training and assessment principles
• industry and legislative stakeholders
• mine-type incidents and risks
• legal requirements of incident management teams
• hazard identification
• self-escape philosophies, systems and equipment
• the techniques and equipment used for collecting and analysing atmospheric condition
• risk management principles and techniques
• classification of types of incidents
• decision making processes
- legislative requirements
- structure of emergency organisations
- structure, roles, capabilities and operational limitations of external resources and agencies used during mines incidents
- rescue team structure, procedures and equipment, and standby team requirements
- effects of heat and humidity
- effects of visibility
- escape strategies and technology
- environmental risks and controls
- media policies and procedures
- equipment required for different types of emergency
- ventilation and its influence on incidents, and decisions to be made
- deployment of staff underground
- call-out procedures
- emotional effects of emergencies on rescuers and mine personnel
- titles and roles of members of incident management team
- services and agencies available to assist in an emergency
- intervention and control techniques for heating, fires, explosions, outburst, extrication or inrushes
- the requirements and structure for fresh air base
- support services role and access
- legislation regarding resumption of normal operations
- legal implications of incidents
- the role of stakeholders
- numbers needed to run the mine at planned operational levels
- equipment handling
- economic considerations and decisions
- insurance policies and considerations
- mine closure procedures and the legislative implications
- sealing procedures and the legislative implications.

**Required Skills**

Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- formulate and develop emergency preparedness plans
- read and interpret mine plans
- assess hazards and associated risks
- evaluate systems and equipment
- write reports
- identify or establish mine site facilities for incident management
- access and use mine site information and recording systems
- communicate effectively with people personally or through technical devices during incidents
- organise personnel and resources
- communicate effectively with members of the media
- develop action plans
- analyse information
• make effective decisions
• participate as team member
• facilitate groups to work together
• brainstorm to collect maximum information
• effectively question
• effectively interview
• carry out fault-tree analyses
• delegate responsibility and tasks.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair, flexible and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
• observation of processes and procedures
• oral and/or written questioning on required knowledge and skills
• testimony from supervisors, colleagues, clients and/or other appropriate persons
• inspection of the final product or outcome
• a portfolio of documentary evidence
• simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.
Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1119A Manage major incidents and emergencies

Unit Descriptor
This unit covers the provision of leadership during and after a major incident and/or emergency. Its application involves strategic management functions, including resource coordination, interaction with employees and their families and dealing with the media.

Units Replaced
This unit replaces the following units:
• MNIL09A Manage major incidents and emergencies

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1.1</td>
<td>Review the emergency preparedness plan and confirm for relevance and timeliness on a regular basis.</td>
</tr>
<tr>
<td>1.2</td>
<td>Review the organisational structure for the management of emergency preparedness and response for relevance and accuracy on a regular basis.</td>
</tr>
<tr>
<td>1.3</td>
<td>Review emergency response procedures for management of classes of incident for relevance and accuracy on a regular basis.</td>
</tr>
<tr>
<td>1.4</td>
<td>Confirm the emergency response procedures for management of decision making processes and decision monitoring systems.</td>
</tr>
<tr>
<td>1.5</td>
<td>Confirm plans with relevant stakeholders and specialists.</td>
</tr>
<tr>
<td>2 2.1</td>
<td>Access incident information receival and recording systems in accordance with site requirements.</td>
</tr>
<tr>
<td>2.2</td>
<td>Access and apply emergency response and evacuation plans and procedures in accordance with site requirements.</td>
</tr>
<tr>
<td>2.3</td>
<td>Establish operations facilities, including communications to support them, in accordance with the emergency plan.</td>
</tr>
<tr>
<td>2.4</td>
<td>Apply action planning processes to manage the situation/incident in accordance with the emergency plan.</td>
</tr>
<tr>
<td>2.5</td>
<td>Identify and apply required services, personnel, equipment and resources for the incident in accordance with the emergency plan.</td>
</tr>
</tbody>
</table>
2.6. Confirm and clarify roles and responsibilities, as specified in the emergency response and evacuation plans and procedures and communicate to all persons.

3  Access and respond to information, advice and support.

3.1 Bring together specialist technical and professional staff to review the situation.

3.2 Develop plans to deal with immediate areas of concern.

3.3 Clarify and confirm individuals roles and responsibilities.

4  Apply post-incident management procedures.

4.1 Determine and establish processes to investigate nature and cause of situation/incident in accordance with statutory and site requirements.

5  Audit and review the effectiveness of the incident/emergency management response.

5.1 Audit response systems for effectiveness and compliance with statutory and management plan standards.

5.2 Audit incident/emergency management response processes for effectiveness and for compliance with statutory and mine site requirements.

5.3 Audit recording systems for effectiveness and for compliance with the emergency preparedness and response plan.

5.4 Respond promptly to instances of non-compliance or other discrepancies/deficiencies revealed by audit and modify the incident/emergency management system accordingly.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

For the purposes of this standard, the definitions below apply:

Audit is a systematic examination against defined criteria to determine whether activities and related results conform to planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve the organisation’s policy and objectives.

Consequence is defined as: the outcome of an event expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain. There may be a range of possible outcomes associated with an event (definition from AS/NZS 4360:1999 Risk Management).
Cost of activities, both direct and indirect, involves any negative impact, including money, time, labour, disruption, goodwill, political and intangible losses.

Frequency is defined as: *a measure of the rate of occurrence of an event expressed as the number of occurrences of an event in a given time.* (definition from AS/NZS 4360:1999 Risk Management)

Hazard is defined as: *a source of potential harm or a situation with a potential to cause loss* (definition from AS/NZS 4360:1999 Risk Management).

Hazard identification is the process of recognising that a hazard exists and defining its characteristics.

Likelihood is *used as a qualitative description of probability and frequency* (definition from AS/NZS 4360:1999 Risk Management).

Loss is any negative consequence, financial or otherwise.

Monitor means to check, supervise, observe critically, or record the progress of an activity, action or system on a regular basis in order to identify change.

Probability is defined as: *the likelihood of a specific outcome, measured by the ratio of specific events or outcomes to the total number of possible events or outcomes.* Probability is expressed as a number between 0 and 1, with 0 indicating an impossible event or outcome and 1 indicating an event or outcome is certain. (definition from AS/NZS 4360:1999 Risk Management)

Risk is defined as: *the chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood* (definition from AS/NZS 4360:1999 Risk Management).

Risk acceptance is defined as: *an informed decision to accept the consequences and the likelihood of a particular risk* (definition from AS/NZS 4360:1999 Risk Management). The criteria for acceptability of risks must be determined by the organisation’s internal policy, goals and/or objectives.

Risk analysis is a systematic use of available information to determine how often specified events may occur and the magnitude of their likely consequences.

Risk assessment is defined as: *the overall process of risk analysis and risk evaluation* (definition from AS/NZS 4360:1999 Risk Management).

Standard operating procedures (SOP) are also known as safe working procedures, safe operating procedures and standard working procedures

Post-incident management is the control of activities arising from an incident and can include:
- legal advice
- environmental aspects
- critical incident stress debriefing
- interviewing
- investigations
- witness interview statements
- restoration of normal operations
- media releases
- public relations
- employee welfare and family support
- security of evidence
- liaison with statutory/legal bodies
- statutory investigations
- review of emergency procedures
- documentation of ongoing operations
- restoration of emergency preparedness.

Types of incident can be identified as, but are not limited to:
- chemical injury
- entrapment
- equipment damage
- fire
- fugitive chemicals
- inundation
- irressipable atmosphere
- personnel injury or death
- rock fall
- unscheduled explosion.

Incidents can be caused by, but are not limited to:
- aircraft accident
- bulk-head collapse
- explosives
- flammable solids or liquids
- Hazchem
- inrush
- mining induced subsidence
- outburst
- release of stored energy
- seismic event
- sulphide dust explosion
- vehicle accidents
- vehicle fire.

Stakeholders and other consulting partners can include, but are not limited to:
- ambulance
- board of directors
- contractors
- critical incident stress debriefing organisations
- customers
• emergency management and assistance organisations
• employee representatives
• employees
• families
• fire brigade
• government mining authorities
• hospital
• insurance companies
• local community
• local government
• manufacturer
• medical staff
• mines rescue service
• police
• specialist professionals
• suppliers.

Required services and resources can include, but are not limited to:
• internal mine services and resources
• contractors
• suppliers
• local community
• manufacturer
• inspectorate
• police
• mines rescue services
• fire brigade
• ambulance
• medical staff
• hospital
• critical incident stress debriefing organisations
• local emergency management organisations
• local government
• media
• coroner’s representative
• security services
• solicitors
• workers representatives
• other mines
• experts such as engineers, scientists
• down-hole camera
• drill rigs
• forensic.

Communications may include:
• radio
• telephone
• telemetry
• verbal
• written
• computers
• runners
• mirrors
• signals
• stench gas
• alarms/sirens.

**Equipment** refers to that needed to control the incident and includes but is not restricted to:
• rescue equipment
• mining equipment
• transport
• specialised equipment from external sources
• monitoring and analysis equipment
• breathing apparatus.

**Immediate areas of concern** may include, but are not restricted to:
• employee welfare
• legal issues
• environmental aspects
• informing the community
• dealing with the media, including
  - radio
  - print media
  - television.

**Operations** facilities are those which are set up to manage an incident and may include, but are not restricted to:
• operations centre
• press room
• mortuary
• muster areas
• meeting rooms
• communications centres and networks.

Future **operations** may include, but are not restricted to:
• sealing mine areas
• restoration to full production
• suspension of operations
• full closure of mine.

**Statutory** requirements may include but are not limited to:
• common law
• coroner
• dangerous goods
• development of training policies/programs to aid compliance
• emergency services
• environmental
• explosives
• gas and petroleum
• industrial relations
• local government
• minerals and extractive industry licensing
• Mines Act
• navigation
• planning and assessment
• road traffic
• safety and health
• trade practices
• waterways
• weights and measures
• workers compensation/Workcover.

**Actions** are to be in accordance with all relevant statutory/legal requirements, particularly:
• requirements for the maintenance of records for statutory/legal breaches
• provision of information and training
• regulations, codes of practice and guidelines relating to statutory/legal compliance
• site representatives and committees
• issue resolution.

**Resources** may include, but are not limited to:
• people
• finance
• equipment
• environment
• buildings/facilities
• technology
• information.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
• knowledge of procedures, requirements and instructions to manage major incidents and emergencies appropriate to a mine site
• implementation of appropriate procedures and techniques for the efficient and effective management of major incidents and emergencies appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. reviewing emergency preparedness planning for mines
b. implementing response procedures for management of different classes of incident/emergency
c. identifying the roles of stakeholders and specialists at incidents/emergencies
d. implementing the structure and roles of on-site functions and personnel
e. organising and coordinating information gathering, analysis and communication
f. implementing action plan development and evaluation
g. establishing incident operations facilities
h. implementing incident management planning
i. applying post-incident management procedures
j. auditing and reviewing incident/emergency management response.

**Required Knowledge**

Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- audit review process and techniques
- call-out procedures
- classification of types of incidents
- decision making processes
- deployment of staff underground
- economic considerations and decisions
- effects of heat and humidity
- effects of visibility
- emergency and disaster planning processes and techniques
- emotional effects of emergencies on rescuers and mine personnel
- environmental risks and controls
- equipment handling
- equipment required for different types of emergency
- escape strategies and technology
- hazard identification
- incident resources and how to access them
- industry and legislative stakeholders
- insurance policies and considerations
- intervention and control techniques for heating, fires, explosions, outburst, extrication or inrushes
- legal implications of incidents
- legal requirements of incident management teams
- legislation applicable to mines
- legislation regarding resumption of normal operations
- legislative requirements
- media policies and procedures
- mine closure procedures and the legislative implications
- mine rescue guidelines and capabilities
- mine-type incidents and risks
- numbers needed to run the mine at planned operational levels
- rescue team structure, procedures and equipment, and standby team requirements
- risk management principles and techniques
• sealing procedures and the legislative implications
• self-escape philosophies, systems and equipment
• services and agencies available to assist in an emergency
• structure of emergency guidelines
• structure of emergency organisations
• structure, roles, capabilities and operational limitations of external resources and agencies used during mines incidents
• support services role and access
• the requirements and structure for fresh air base/refuge chambers
• the role of stakeholders
• the techniques and equipment used for collecting and analysing atmospheric conditions
• titles and roles of members of incident management team
• training and assessment principles
• ventilation and its influence on incidents, and decisions to be made.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
• access and use mine site information and recording systems
• analyse information
• assess hazards and associated risks
• brainstorm to collect maximum information
• carry out fault-tree analyses
• communicate effectively with members of the media
• communicate effectively with people personally or through technical devices during incidents
• delegate responsibility and tasks
• develop action plans
• effectively interview
• effectively question
• evaluate systems and equipment
• facilitate groups to work together
• formulate and develop emergency preparedness plans
• identify or establish mine site facilities for incident management
• make effective decisions
• organise personnel and resources
• participate as a team member
• read and interpret mine plans
• write reports.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.
Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair, flexible and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNC1125A  Initiate, monitor and supervise contracts

Unit Descriptor
This unit addresses the planning, tender preparation, evaluation, contract negotiation and the monitoring and supervision of the contract. Its application is to ensure the establishment, implementation and maintenance of a business relationship between the mine site and external parties, together with the determination of the guidelines governing the conduct of the parties.

Units Replaced
This unit replaces the following units:
- MNIL13A Initiate, monitor and supervise contracts

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scope, plan and prepare for contracts.</td>
</tr>
<tr>
<td>1.1</td>
<td>Define areas/work for contracting.</td>
</tr>
<tr>
<td>1.2</td>
<td>Define and plan for stages of contract preparation and implementation.</td>
</tr>
<tr>
<td>1.3</td>
<td>Undertake site inspections in accordance with enterprise requirements.</td>
</tr>
<tr>
<td>1.4</td>
<td>Identify and specify roles and responsibilities of all relevant individuals and groups.</td>
</tr>
<tr>
<td>2</td>
<td>Prepare specifications and tenders.</td>
</tr>
<tr>
<td>2.1</td>
<td>Define the work to be tendered.</td>
</tr>
<tr>
<td>2.2</td>
<td>Establish standards and conditions to be met by tenderers.</td>
</tr>
<tr>
<td>2.3</td>
<td>Evaluate the enterprise’s standard tender documentation and modify it to suit the tender.</td>
</tr>
<tr>
<td>2.4</td>
<td>Define the procedural steps of the tender and consequential contract.</td>
</tr>
<tr>
<td>2.5</td>
<td>Write the tender document and ensure it is ready for distribution and advertising.</td>
</tr>
<tr>
<td>3</td>
<td>Evaluate tenders and negotiate and award contract.</td>
</tr>
<tr>
<td>3.1</td>
<td>Identify tenders received not in accordance with the conditions of tendering and with inaccurate information.</td>
</tr>
<tr>
<td>3.2</td>
<td>Identify tenders of unusually high and low rates.</td>
</tr>
<tr>
<td>3.3</td>
<td>Prepare a short list of appropriate tenderers.</td>
</tr>
<tr>
<td>3.4</td>
<td>Assess the financial position, past performance and insurance credentials of prospective contractors.</td>
</tr>
</tbody>
</table>
3.5 Identify prospective contractors who understand the nature, volume of works and site conditions.

3.6 Evaluate the current commitments of prospective contractors and their ability to complete works within practical time lines.

3.7 Evaluate the occupational health and safety aspects of prospective contractors.

3.8 Clarify and negotiate details and any uncertainty of tenders.

3.9 Write an evaluation report of tenders with recommendation of a contractor.

3.10 Advise successful and unsuccessful tenders.

4 Evaluate tenders and negotiate and award contract.

4.1 Supervise construction or installation sites.

4.2 Coordinate materials procurement.

4.3 Evaluate contract conditions in line with work progress.

4.4 Negotiate contract variations.

4.5 Monitor activities in accordance with OH&S, environmental legislative, enterprise and contractor requirements.

5 Finalise contract.

5.1 Finalise outstanding claims.

5.2 Monitor and finalise repair work of defects/liabilities.

5.3 Release detention monies.

5.4 Prepare and “sign off” final certificate and other documentation.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Contract planning may include:
- specifications
- schedules
- phasing
- services and facilities
- site inspection and requirements
- potential contractors.

Site inspections may be conducted to:
• confirm planning
• inspect preparation work
• assess compliance with specifications
• assess OH&S requirements and compliance.

**Evaluation** of tenders or contracts may include:
• schedules evaluation
• investigation of prospective contractors.

**Contracts** and tenders may be:
• external applicants
• internal.

**Documentation** may include:
• specifications
• briefs
• drawings
• pricing schedules
• instruments of agreement
• acceptance
• general conditions
• permits
• tenders
• plans of other utilities
• project plan.

**OH&S, environmental legislative, enterprise and contractor requirements** may include:
• common law
• dangerous goods
• development of training policies/programs to aid compliance
• industrial relations
• industry licensing
• local government
• Mines Act
• navigation
• planning and assessment
• trade practices
• waterways
• weights and measures
• workers compensation/WorkCover

**Negotiations** may be with a variety of internal or external sources and be:
• formal or informal
• short term or ongoing
• multi-lingual and cross-cultural
• enterprise agreements
• legislation regulation compliance and include relative authorities, project managers, employees, contractors, customers and the community.
Processes for **consultation** may include:
- committees
- consultation with statutory/legal authorities
- consultation with industrial representatives
- consultation with agencies/site representatives
- issue resolution procedures and participative/consultative procedures conducted by supervisory staff within the area of managerial responsibility.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**

The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:

- knowledge of procedures, requirements and instructions to initiate, monitor and supervise contracts appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective initiating, monitoring and supervising contracts appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. preparing tenders
  b. evaluating tenders
  c. identifying, assessing, investigating and reporting departures from contractual requirements
  d. monitoring contract work procedures and progress
  e. supervising contract activities
  f. finalising all contract activities.

**Required Knowledge**

Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- enterprise tendering procedures
- enterprise contract procedures
- enterprise contract completion processes
- site inspection procedures
- investigation procedures
- evaluation and investigation requirements
- enterprise reporting procedures
- reporting requirements
- characteristics, technical capabilities and limitations of relevant materials
- material handling procedures
- relevant legislation
- OH&S and environmental legislation acts and procedures.

**Required Skills**
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- contribute to planning processes
- monitor work progress
- order materials
- apply relevant legislation
- conduct investigations
- conduct site inspections
- prepare reports
- manage work effectively to achieve goals and results
- take a leading role in initiating actions and making decisions
- clearly identify what is required of others
- maintain a focus on objectives.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair, flexible and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
• simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons. Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
### MNCG1126A Conduct business negotiations

**Unit Descriptor**
This unit covers the conduct of the mine site’s business negotiations. Its application involves reviewing the mine site’s business objectives and strategies to maximise results.

**Units Replaced**
This unit replaces the following units:
- MNIL17A Conduct business negotiations.

**Employability Skills**
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
</table>
| 1 Establish and confirm the mine site’s business objectives. | 1.1 Identify and target business opportunities available to the mine site.  
1.2 Facilitate discussions with stakeholders to provide strategies and ideas to meet outcomes.  
1.3 Analyse information to allow for assessment of the short-term and long-term position of the business.  
1.4 Ensure agreed decisions and recommendations fall within the mine site’s business objectives, statutory/legal requirements and are appropriate to desired outcomes. |
| 2 Conduct business negotiations. | 2.1 Consult and/or lobby key stakeholders who can assist achievement of the outcome.  
2.2 Ensure preparation for the meeting is sufficient to enable effective business negotiation and to achieve desired outcomes.  
2.2 Ensure contributions to the negotiations are clear, concise and relevant to achieving business objective.  
2.4 Document/record appropriate and accurate records and key outcomes of negotiations. |
| 3 Evaluate negotiation outcomes. | 3.1 Evaluate outcomes of negotiations.  
3.2 Refer outcomes of negotiations to stakeholders who assisted in preparation of strategies.  
3.3 Review outcomes of negotiations for improvement.  
3.4 Follow up, and circulate as necessary, outcomes and decisions. |
RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

For purposes of consistency, the following definitions have been applied in this standard.

Consultation is seeking people’s views on particular issues.

Information to allow people to contribute effectively may cover date, venue, time of meeting, directions as to how to reach the venue, purpose and objectives, agenda and briefing/discussion papers.

Outcomes are clear results which are to be achieved as a result of the meeting.

Summaries are briefly going over the main discussion points and areas of agreement and disagreement to help people come to a collective decision.

Statutory/legal requirements may include but are not limited to:
- common law
- dangerous goods
- development of training policies/programs to aid compliance
- industrial relations
- industry licensing
- local government
- mines act
- navigation
- planning and assessment
- trade practices
- waterways
- weights and measures
- Workers Compensation/WorkCover.

Negotiations may be with a variety of internal or external sources and may be:
- formal or informal
- short term or ongoing
- multi-lingual and cross-cultural
- enterprise agreements
- legislation regulation compliance and include relative authorities, project managers, employees, contractors, customers and the community.

Stakeholders may include:
- regulatory authorities
- tenderers
- project managers
- contractors
- employees
• community
• customers
• suppliers.
Processes for **consultation** may include:
- committees
- consultation with statutory/legal authorities
- consultation with industrial representatives
- consultation with agencies/site representatives
- issue resolution procedures and participative/consultative procedures conducted by supervisory staff within the area of managerial responsibility.

**EVIDENCE GUIDE**

**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to conduct business negotiations appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective conducting business negotiations appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. effectively analysing the external environment for business opportunities
  b. developing their negotiation strategy
  c. planning and preparing for business negotiations
  d. identifying possible outcomes
  e. consulting and lobbying key stakeholders
  f. developing business strategies
  g. participating in and influencing negotiations
  h. evaluating the outcomes

**Required Knowledge**
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:
- advanced written and oral communication methods
- organisational goals and objectives
- subject/product knowledge
- assertive techniques
- advanced negotiation skills
- receptive listening skills
- statutory and site rules, policies, procedures and regulations
- mine operating procedures
- risk management processes and techniques
- risk control and management systems
- reporting and recording procedures
- accessing, evaluating and applying data from organisational systems
- action planning methods.
Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- take a leading role in initiating action and making decisions
- establish the rules of procedure
- adopt communications styles appropriate to listeners and situations, including selecting an appropriate time and place
- identify the information needs of participants
- listen actively, ask questions, clarify points and rephrase others’ statements to check mutual understanding
- prioritise objectives and schedule work to make best use of time and resources
- modify communications in response to feedback from participants
- actively encourage the free exchange of information
- produce a variety of solutions before taking a decision
- show respect for the views and actions of others
- encourage participants to ask questions or rephrase statements to clarify their understanding
- encourage decisions which are realistic for the situation
- produce own ideas from experience and practice
- reconcile and make use of a variety of perspectives when making sense of a situation
- actively build relationships with others
- present positively to others.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.
The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**

Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1128A Establish mine mechanical plant, services and infrastructure systems

Unit Descriptor
This unit covers the design/selection, installation and commissioning functions required to establish mine mechanical plant, services and infrastructure systems.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

ELEMENT PERFORMANCE CRITERIA

1  Design/selection specifications for mine mechanical plant, services and infrastructure systems.
   1.1 Access, interpret and clarify the legislative and site requirements related to mine mechanical plant, services and infrastructure systems.
   1.2 Establish design/selection specifications for the mine mechanical plant, services and infrastructure systems from a comprehensive analysis of operating requirements.
   1.3 Identify design/selection options from an analysis of all relevant technical, operational and financial information, interface with existing plant where appropriate, including hazard identification and risk analysis.
   1.4 Select the preferred plant, equipment and services options on the basis of performance against specification requirements.

2  Establish installation, testing and commissioning systems and procedures.
   2.1 Assess the hazards, analyse and evaluate risks associated with the installation of plant, equipment and services in accordance with site procedures.
   2.2 Establish procedures for installing, testing and commissioning plant, equipment and services.
   2.3 Plan and prepare for integration of new and existing systems and procedures to achieve optimum performance.
   2.4 Identify resources required for the implementation of mine mechanical plant, services and infrastructure systems.
   2.5 Determine training needs.

3  Establish operational parameters and maintenance requirements for plant,
   3.1 Incorporate the operational parameters and operational/maintenance risk assessment for plant, equipment and services into site documentation in accordance with site and legislative requirements.
3.2 Establish maintenance plan for plant, equipment and services from site and legislative requirements and incorporate into existing maintenance system.

3.3 Incorporate recording and reporting requirements of new plant, equipment and services information into existing site documentation.

4 Install, commission and test mine mechanical plant, services and infrastructure systems.

4.1 Conduct a risk assessment for the installation, commissioning and testing of mechanical plant, services and infrastructure systems.

4.2 Install mechanical plant, services and infrastructure systems.

4.3 Commission and test equipment compliance in accordance with design specifications and site requirements.

4.4 Respond to non-compliance or other discrepancies/deficiencies revealed by commissioning and testing.

5 Implement mine mechanical plant, services and infrastructure.

5.1 Identify and interpret the legislative and site requirements related to the implementation of mine mechanical plant, services and infrastructure systems.

5.2 Forecast, obtain and allocate/schedule resources required for the implementation of mine mechanical plant, services and infrastructure systems.

5.3 Identify, clarify and communicate to all personnel roles and responsibilities, related to the implementation of mine mechanical plant, services and infrastructure systems.

5.4 Implement mine mechanical plant, services and infrastructure systems training program.

5.5 Consult with relevant stakeholders and implement changes to mine mechanical plant, services and infrastructure systems and implementation procedures.

RANGE STATEMENT

The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

Infrastructure refers to fixed plant and equipment which may include:

- fabrication and construction areas
- servicing areas
- re-fuelling points
- workshops and equipment
- equipment storage areas
- bathrooms
- water treatment plant
- buildings and structures eg bins, silos, crushers, feeders
- storage facilities
- coal preparation plant
- cranes
- sewerage treatment plant
- emergency facilities (equipment)
- testing equipment
- stockpile and coal load out.
- conveyor systems
- pipelines
- compressors
- haulage winches
- process treatment plant
- air conditioning
- pumps and stations
- ventilation fans
- winders
- battery charging stations
- generators
- gas plant.

**Plant** may include:
- Wheeled transport may include:
  - rubber tyred man transport
  - multi purpose vehicles
  - load haul dump
  - forklifts
  - front end loader
  - skid steer loader and grader
- Rail transport may include:
  - locomotives (electric / diesel)
  - rail mounted personnel carriers
  - rolling stock
  - drift haulage systems
- Track vehicles may be fixed or mobile and may include:
  - shearer carriers
  - personnel carriers
  - chock recovery vehicles (mules)
  - mine dozer
- Shaft winding systems, eg product, personnel and material and may include:
  - head gear
  - cages and skips
  - winding apparatus and communications
- control system
- discharge and loading facilities
- counter balances

- Conveyor system may include:
  - conveyor belts
  - drive heads
  - tail ends transfer points
  - surge bins
  - inter seam bins
  - fabricated bins

- Product slurry pumping may include:
  - batching stations
  - dewatering systems
  - watering reticulation pumping stations

- Production equipment may include:
  - shearer
  - armoured face conveyor
  - pantech
  - chocks
  - stage loader
  - face drill rigs
  - shuttle cars
  - ram cars
  - ratio feeders
  - breaker line support
  - roof bolters (mobile and hand held)
  - rib bolters
  - road header
  - continuous miners
  - in-seam miners
  - high wall miners
  - loaders
  - shotfiring
  - hydraulic mining.

Site requirements may contain:

- legislation and regulations
- relevant International / Australian Standards
- management plans
- OH&S policy
- codes of practice
- industry guidelines
- approved standards
- manufacturer instructions
- standard operational procedures (or equivalent)
- mining performance parameters.
Site documentation and training policy may include:

- legislative requirements
- management plans and procedures.
Mine services may include:
- water
- wastewater
- compressed air
- fire fighting
- gas drainage
- fuel
- electrical reticulation
- waste disposal
- condition monitoring
- phones
- radios.

Risk is defined as: the chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood (definition from AS/NZS 4360:1999 Risk Management).

Hazard is defined as: a source of potential harm or a situation with a potential to cause loss (definition from AS/NZS 4360:1999 Risk Management).

Maintenance is to restore or keep at the level that it was originally designed to, by:
- inspecting and testing plant and equipment
- monitoring plant and equipment
- servicing equipment
- repairing equipment
- overhauling equipment.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to establish mine mechanical plant, services and infrastructure systems appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective establishment of a mine mechanical plant, services and infrastructure systems appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. interpreting and communicating information on plant, equipment and services systems’ operations
  c. reviewing a risk assessment to identify plant, equipment and services hazards and risks
  d. applying mine design principles to minimise the likelihood of inappropriate mine plant, equipment and services being sourced and commissioned
  e. evaluating and selecting plant, equipment and services systems
  f. defining roles and responsibilities for management of plant, equipment and services systems
g. establishing the operational and maintenance documentation for plant, equipment and services systems
h. establishing and reviewing reporting procedures
i. establishing and reviewing the training program
j. establishing and implementing the management plans for mine plant, services and infrastructure systems
k. reviewing and auditing the effectiveness and compliance of the management plan for plant, equipment and services and taking appropriate corrective action
l. establishing and reviewing emergency response procedures.

**Required Knowledge**
Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- legislative and site-specific requirements for mine plant, services and infrastructure
- emergency response and disaster planning processes and techniques
- audit review process and techniques
- mine operating procedures for mine plant, services and infrastructure
- mine design relating to mine plant, services and infrastructure
- energy sources, including protection and reticulation systems for electrical, hydraulic, compressed air, diesel
- safety design features of mine services and infrastructure
- a basic knowledge of computer based systems related to the monitoring and operation of mine plant, services and infrastructure
- training programs
- fire fighting systems
- safety design features for maintenance of mine plant, services and infrastructure
- stores systems
- specifications for fixed plant and infrastructure.

**Required Skills**
The ability to:

- access, interpret and apply:
  - technical information
  - site / legislative requirements
  - records and reports
  - briefings and handover details
- apply the principles of mine design
- assess the risks and consequences and ensure appropriate controls are applied to mine plant, services and infrastructure
- develop procedures appropriate to mine operations for management of mine plant, services and infrastructure
- plan and coordinate work
- identify training needs related to mine plant, services and infrastructure
- interpret and apply manufacturer instructions.
Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function according to specific mine site requirements.

Prerequisite units
There are no prerequisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources in the work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence require to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:

- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- a portfolio of documentary evidence
- inspection of the final product or outcome
- simulation and/or scenario analysis

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the participant and to the requirements of the unit of competency.
MNCG1129A Establish mechanical standard and engineering practices for transport and production equipment

Unit Descriptor
This unit covers the mechanical standard of engineering practice required to develop and establish safe transport and production equipment.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Develop production and transport systems.</td>
</tr>
<tr>
<td>1.1</td>
<td>Access, interpret and clarify the legislative and site requirements related to production and transport systems.</td>
</tr>
<tr>
<td>1.2</td>
<td>Identify the requirements for, and purpose of, production and transport systems in accordance with the system of mining.</td>
</tr>
<tr>
<td>1.3</td>
<td>Identify systems options from an analysis of all relevant technical, operational and financial information.</td>
</tr>
<tr>
<td>1.4</td>
<td>Establish specification for the production and transport system from a comprehensive analysis of operating requirements.</td>
</tr>
<tr>
<td>1.5</td>
<td>Select the preferred systems options on the basis of performance against specification requirements.</td>
</tr>
<tr>
<td>2</td>
<td>Select equipment for production and transport systems.</td>
</tr>
<tr>
<td>2.1</td>
<td>Identify the mechanical requirements for and purpose of production and transport equipment against systems requirements.</td>
</tr>
<tr>
<td>2.2</td>
<td>Conduct a detailed scoping of the operational requirement and develop key selection criteria, including hazard identification and risk analysis.</td>
</tr>
<tr>
<td>2.3</td>
<td>Establish specification for the required production and/or transport equipment.</td>
</tr>
<tr>
<td>2.4</td>
<td>Select the preferred equipment solutions on the basis of performance against specification requirements.</td>
</tr>
<tr>
<td>3</td>
<td>Establish systems and procedures to install and commission equipment.</td>
</tr>
<tr>
<td>3.1</td>
<td>Establish systems to identify hazards and analyse and evaluate risks associated with the installation of production and transport systems and equipment.</td>
</tr>
<tr>
<td>3.2</td>
<td>Plan and prepare for integration of new and existing mine production and transport systems and processes.</td>
</tr>
</tbody>
</table>
3.3 Establish procedures for installing and commissioning production and transport systems and equipment.

3.4 Establish systems and procedures, to satisfy identified production and transport systems training requirements.

4 Establish systems for the operation and maintenance of production and transport systems and equipment.

4.1 Establish operational procedures for production and transport systems and equipment and incorporate into site documentation.

4.2 Establish maintenance procedures for production and transport systems and equipment from site and legislative requirements, and incorporate into site documentation.

4.3 Establish procedures for reviewing and modifying work processes.

4.4 Establish emergency response and evacuation plans and procedures in accordance with site requirements.

4.5 Establish the system of recording and reporting production and transport equipment information.

5 Establish systems for audit and review of production and transport systems and equipment.

5.1 Establish mechanical procedures to audit and review equipment compliance in accordance with legislative and site requirements.

5.2 Identify and assess future production and transport systems and equipment requirements, and incorporate into planning processes.

5.3 Establish procedures to audit and review the currency and compliance of operation and maintenance relating to production and transport systems and equipment in accordance with legislative and site requirements.

5.4 Establish procedures for incorporating feedback into the audit/review system.

5.5 Establish procedures to confirm the currency, relevance and compliance of the training program against identified requirements.

5.6 Establish procedures for response to instances of non-compliance or other discrepancies/deficiencies revealed by audit.

5.7 Establish procedures to audit emergency response and evacuation systems for compliance with site requirements.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance.

**Transport systems** include capacities for personnel, equipment/materials and product and may be:
- wheeled
- railed
- tracked
- skidded
- conveyor or product slurry pumped
- shaft/drift winding.

**Specifications** may include:
- performance requirement
- costs
- dimensions
- capacity
- OH&S requirements
- training requirements
- key selection criteria.

**Hazard** is defined as: *a source of potential harm or a situation with a potential to cause loss* (definition from AS/NZS 4360:1999 *Risk Management*).

**Risk** is defined as: *the chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood* (definition from AS/NZS 4360:1999 *Risk Management*).

**Maintenance** may be divided into:
- predictive
- preventive
- breakdown.

**Audit** is defined as: *a systematic examination against defined criteria to determine whether activities and related results conform to planned arrangement, and whether these arrangements are implemented effectively and are suitable to achieve the organization’s policy and objectives* (AS/NZS 4804: 2001).

**Standard operating procedures (SOP)** are also known as safe working procedures, safe operating procedures and standard working procedures.

**Wheeled transport** may include:
- rubber tyred man transport
- multi purpose vehicles
- load haul dump
- forklifts
- front end loader
- skid steer loader and grader.
Rail transport may include:
- locomotives (electric/diesel)
- rail mounted personnel carriers
- rolling stock
- drift haulage systems.

Track vehicles may be fixed or mobile and may include:
- shearer carriers
- personnel carriers
- chock recovery vehicles (mules)
- mine dozer.

Shaft winding systems may include product, personnel and material and may include:
- head gear
- cages and skips
- winding apparatus and communications
- control system
- discharge and loading facilities
- counter balances.

Conveyor system may include:
- conveyor belts
- drive heads
- tail ends transfer points
- surge bins
- inter seam bins
- fabricated bins.

Product slurry pumping may include:
- batching stations
- dewatering systems
- watering reticulation pumping stations.

Production equipment may include:
- shearer
- armoured face conveyor
- pantech
- chocks
- stage loader
- face drill rigs
- shuttle cars
- ram cars
- ratio feeders
- breaker line support
- roof bolters (mobile and hand held)
- rib bolters
- road header
• continuous miners
• in-seam miners
• high wall miners
• auger miners
• loaders
• shotfiring
• hydraulic mining.

Site requirements may contain:
• legislation and regulations
• relevant International/Australian Standards
• management plans
• OH&S policy
• codes of practice
• industry guidelines
• approved standards
• manufacturer instructions
• standard operational procedures (or equivalent).

Site documentation and training policy may include:
• legislative requirements
• management plans and procedures.

EVIDENCE GUIDE

Critical Aspects of Evidence
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
• knowledge of procedures, requirements and instructions to establish mechanical standard and engineering practices for transport and production equipment appropriate to a mine site
• implementation of appropriate procedures and techniques for the efficient and effective establishment of mechanical standard and engineering practices for transport and production equipment appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a applying personal and operational safety procedures
  b interpreting and communicating information on production and transport systems operations
  c reviewing risk assessment to identify production and transport systems and equipment hazards and risks
  d applying mine design principles to minimise the likelihood of inappropriate production and / or transport systems and equipment being sourced and commissioned
  e evaluating and selecting production and transport systems and equipment systems
  f defining roles and responsibilities for management of production and transport systems
  g establishing and reviewing the training program
  h documenting the management plan for production and transport systems and equipment
  i establishing and implementing the management plans for production and transport systems
j reviewing and auditing the effectiveness and compliance of the management plan for production and transport systems and taking appropriate corrective action
k establishing and reviewing emergency response procedures
l establishing reporting procedures.

Required Knowledge
Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- legislative requirements and instructions, including transport rules, maintenance schemes, standard operating procedures, training, testing on diesel vehicles, battery charging, underground fuel depots, conveyor belts
- mine operation procedures
- geological structures
- mine plans
- mine design relating to production and transport systems and equipment
- production and transport systems and equipment management requirements
- site environmental monitoring requirements
- risk management procedures
- production and transport systems and equipment legislative inspection requirements
- mine reporting procedures
- emergency response and evacuation planning processes and techniques
- audit review processes and techniques
- production and transport equipment and systems (types, uses, characteristics and limitations appropriate for safe operation at the mine site)
- energy sources, including electrical, hydraulic, pneumatic, diesel
- safety design features of production and transport systems
- standard operating procedures relating to production and transport equipment
- stores system
- specification design criteria, including noise, dust, lighting, ergonomics, remote control, physical clearance, confined space, visibility, seating vibration and machine equipment and personal protection
- training programs
- a basic knowledge of computer based systems relating to production and transport systems
- fire fighting systems.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:

- access, interpret and apply:
  - technical information
  - briefings and handover details
- apply the principles of mine design
- assess the risks and consequences and ensure appropriate controls are applied to production and transport systems and equipment
• develop procedures appropriate to mine operations for management of production and transport systems and equipment
• plan and coordinate work
• identify training needs related to production and transport systems
• interpret and apply manufacturer instructions.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.

All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

Methods of Assessment
Appropriate methods of assessment for this unit will usually include:
• observation of processes and procedures
• oral and/or written questioning on required knowledge and skills
• testimony from supervisors, colleagues, clients and/or other appropriate persons
• a portfolio of documentary evidence
• inspection of the final product or outcome
• simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.
MNCG1130A Establish maintenance management system for mechanical plant and equipment

Unit Descriptor
This unit covers the establishment of maintenance management systems in both underground and open cut mines.

Employability Skills
The required outcomes described in this Unit of Competency contain applicable facets of employability skills. The Employability Skills Qualification Summary for the qualification in which this Unit of Competency is packaged will assist in identifying employability skill requirements.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Develop maintenance management system.</td>
</tr>
<tr>
<td>1.1</td>
<td>Develop maintenance strategy for plant and equipment that meets business and legislative requirements.</td>
</tr>
<tr>
<td>1.2</td>
<td>Consult with relevant stakeholders.</td>
</tr>
<tr>
<td>1.3</td>
<td>Develop maintenance system to meet the requirements of the maintenance strategy.</td>
</tr>
<tr>
<td>1.4</td>
<td>Determine resource requirements, including budget and staffing requirements.</td>
</tr>
<tr>
<td>1.5</td>
<td>Establish roles and responsibilities.</td>
</tr>
<tr>
<td>1.6</td>
<td>Allocate and train staff to meet maintenance schedules.</td>
</tr>
<tr>
<td>2</td>
<td>Implement and monitor the maintenance management system.</td>
</tr>
<tr>
<td>2.1</td>
<td>Develop procedures and inspection and maintenance schedules.</td>
</tr>
<tr>
<td>2.2</td>
<td>Communicate strategy to relevant stakeholders.</td>
</tr>
<tr>
<td>2.3</td>
<td>Implement maintenance management schedules.</td>
</tr>
<tr>
<td>2.4</td>
<td>Maintain maintenance records.</td>
</tr>
<tr>
<td>2.5</td>
<td>Monitor effectiveness of the maintenance management system and workplace practices against objectives, timelines, key performance indicators and regulations.</td>
</tr>
<tr>
<td>2.6</td>
<td>Monitor compliance with the schedules.</td>
</tr>
<tr>
<td>2.7</td>
<td>Analyse maintenance reports and system output information.</td>
</tr>
<tr>
<td>2.8</td>
<td>Identify defective components, sub-assemblies and design faults.</td>
</tr>
<tr>
<td>2.9</td>
<td>Monitor effective use of resources.</td>
</tr>
<tr>
<td>3</td>
<td>Audit and review.</td>
</tr>
<tr>
<td>3.1</td>
<td>Develop and document corrective action plan, based on outcome of monitoring process.</td>
</tr>
<tr>
<td>3.2</td>
<td>Implement and test modifications.</td>
</tr>
</tbody>
</table>
3.3 Document system modifications.

4 Report on maintenance management system.

4.1 Document system in accordance with organisation’s guidelines.

4.2 Communicate system to relevant personnel.

RANGE STATEMENT
The following range of variables is subject to site specific operations, but is not limited to the following details. Site procedures, regulations and occupational health and safety and other relevant legislation apply to all elements and performance criteria.

**Maintenance strategy** may include:
- minimising risk to people and equipment
- defining the actions necessary to meet business and legislative requirements
- review of failure modes
- manufacturer requirements.

**Maintenance** is to restore or keep at the level that it was originally designed to, by:
- inspecting and testing plant and equipment
- monitoring plant and equipment
- servicing equipment
- repairing equipment
- overhauling equipment.

**Equipment** may include entire item of plant or individual components of the item of plant.

**Stakeholders** may include:
- regulatory authorities
- project managers
- contractors
- client representatives
- government authorities
- community groups
- engineers
- architects
- employees.

**Maintenance Management System** is the overarching combination of processes that is documented in policies, plans, procedures, schedules, audit and recording mechanisms, which determines how maintenance is implemented, controlled, monitored and reviewed at the mine.

**EVIDENCE GUIDE**
**Critical Aspects of Evidence**
The evidence required to demonstrate this competency must be relevant to mine site operations. In addition to satisfying the requirements of all elements, performance criteria, required knowledge and skills, evidence must include demonstration of:
- knowledge of procedures, requirements and instructions to establish the maintenance management system appropriate to a mine site
- implementation of appropriate procedures and techniques for the efficient and effective establishment of the maintenance management system appropriate to a mine site, while complying with site risk control, health, safety, environmental, quality and communication requirements. This will include:
  a. applying personal and operational safety procedures
  b. conducting activities safely and efficiently
  c. achieving quality and productivity targets
  d. adhering to and understanding relevant legislative (state and federal) requirements and site requirements
  e. adhering to and understanding environmental safety and community issues
  f. defining roles and responsibilities for maintenance management for plant and equipment
  g. developing maintenance schedules
  h. monitoring effective use of resources
  i. establishing and reviewing reporting procedures
  j. establishing and reviewing training program
  k. reviewing and auditing the effectiveness and compliance on the maintenance management plan for plant and equipment and taking appropriate corrective action.

**Required Knowledge**

Specific knowledge is required to achieve the performance criteria in this unit to the standards of performance required in the workplace, to transfer the skills to other contexts and to deal with unplanned events. Assessment requires evidence of the ability to identify and explain the purpose of:

- legislative, Australian Standards and site specific requirements for maintenance of mechanical systems including communications, emergency procedures, risk management, recording and reporting, mines rescue, OH&S, manufacturer instructions, standard work procedures, training, fire fighting, handling and storing of dangerous goods, local government and power authority requirements
- mine operating systems and procedures, including transport systems, conveyor systems, systems of mining, ventilation systems, gas management systems and mine water management systems
- stores systems
- protection systems
- reticulation systems
- specifications from mechanical systems
- audit procedures
- mine design issues relating to mechanical systems
- organisation structure
- use of computer based systems relating to mechanical maintenance systems
- workplace training methods
- safety design features for maintenance of mechanical systems
- maintenance surveys
- work role definitions
- reporting methods and alternatives
- community expectations
- consultative strategies
• alternative documentation systems for procedures
• mine equipment.

Required Skills
Specific skills are required to achieve the performance criteria in this unit. Assessment needs to obtain evidence of the ability to:
• access, interpret and apply:
  - technical information
  - site / legislative requirements
  - records and reports
  - briefings and handover details
• assess the risks and consequences attached to mechanical systems
• develop procedures appropriate to mine operations for management of mechanical maintenance systems
• plan and coordinate work
• manage confined spaces
• identify training needs related to mechanical maintenance systems
• interpret manufacturer instructions
• conduct maintenance surveys
• liaise with other parties
• coordinate others
• use information management systems
• analyse mechanical maintenance data
• use measuring equipment
• write reports
• facilitate meetings.

Assessment and Interdependence of Units
This unit may be assessed with other relevant units forming a cohesive work function, according to specific mine site requirements.

Pre-requisite units
There are no pre-requisite units for this unit.

Resource Implications
Assessment of this competency requires typical resources normally used in a mine site work environment. Selection and use of resources for particular mine sites may differ due to mine site conditions, equipment availability, equipment/plant types and different contexts.

Consistency in Performance
To ensure consistency of performance, this unit may be assessed over a period of time and a range of work and site conditions. Local site factors will influence the breadth of evidence required to demonstrate the competency.

Context for Assessment
This unit should be assessed in the work environment where possible. Some assessment events may be conducted under simulated conditions where issues of safety and/or environmental damage are limiting factors.
All assessments must be valid, reliable, fair and flexible, and sufficient evidence should be accumulated to demonstrate the required competence.

The assessment environment should not disadvantage the participant. Eg, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

**Methods of Assessment**

Appropriate methods of assessment for this unit will usually include:
- observation of processes and procedures
- oral and/or written questioning on required knowledge and skills
- testimony from supervisors, colleagues, clients and/or other appropriate persons
- inspection of the final product or outcome
- a portfolio of documentary evidence
- simulation and/or scenario analysis.

Where performance is not directly observed and/or is required to be demonstrated over a period of time and/or in a number of locations, any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons.

Questioning should be undertaken in such a manner as is appropriate to the language and literacy levels of the candidate and to the requirements of the unit of competency.