

METALLIFEROUS MINING TRAINING PACKAGE IMPLEMENTATION GUIDE

MNM99 version 3.0

Western Australian Department of Education and Training

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Foreword

This Implementation Guide has been generated to enable the stakeholders in the Metalliferous Mining industry in Western Australia to participate in the managed implementation of the National Metalliferous Mining Training Package MNM99 version 3.

The Guide has been developed with cooperation from WA industry, Registered Training Organisations (RTOs) delivering metalliferous mining qualifications and key stakeholders in industry sectors where publicly funded training has not been apparent in the past. To achieve maximum advantage from the Guide, its implementation should occur in a planned manner.

Information within this Guide should provide guidance on how competency standards may be selected and applied to achieve suitable outcomes and qualifications, for and within an industry.

The Metalliferous Mining Training Package MNM99 version 3 was endorsed by Ministers for vocational education and training on 10 July 2003.

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Introduction

This Guide provides information that will facilitate the implementation of the Metalliferous Mining Training Package MNM99 version 3 in Western Australia. This Guide is designed to aid Registered Training Organisations (RTOs) to convert from Training Package qualifications to revised Training Package qualifications within the scope of their training delivery.

The Guide should be read in conjunction with the **endorsed components** of the Metalliferous Mining Training Package MNM99 version 3.

The Guide provides information on:

- Transition arrangements
- Licensing requirements (if any)
- Assessment
- Funding
- Learning resources and assessment materials
- A mapping of current publicly funded qualifications to Training Package qualifications
- An allocation of nominal hours to units of competency and total hours for qualifications
- A mapping of current Traineeship courses to new qualifications
- A set of appropriate sample, or model, training programs at each AQF level
- An indication of availability of supporting materials for delivery of qualifications

Obtaining the Training Package

The Metalliferous Mining Training Package can be purchased from:

Australian Training Products

Level 25, 150 Lonsdale Street

Melbourne Victoria 3000

Telephone: (03) 9655 0600

Facsimile: (03) 9639 4684

Email: sales@atpl.net.au

Information on National Training Packages is also available through the National Training information Service (NTIS), which can be located on the internet at:

www.ntis.gov.au

Note: full texts of National Training Packages are not published on the NTIS website, merely the qualifications and the Units of competency

All RTOs who have Training Package qualifications on their Scope of Delivery must obtain a copy of the relevant Training Package.

An Overview of the Metalliferous Mining Industry

Mining has been and remains important to the Australian economy contributing to jobs, GDP, productivity growth and exports. The Australian metalliferous mining sector is the largest contributor to national mining employment, accounting for 42 % of the workforce. Besides producing metalliferous ores, mines within the sector are involved in mineral exploration and the provision of exploration services.

At the production end of the process, the Australian metalliferous mining sector is involved in processing and refining. Around 80% of Australia's mineral commodity production (including refined metals) is exported.

The major metalliferous mining activities in Australia are:

- Open cut mining - open pit/strip mining, dredge mining, solar evaporation
- Underground mining
- Processing - milling, smelting, froth flotation, leaching, magnetic separation, electrostatic and gravity separation
- Engineering and administrative services
- Exploration/mine establishment/mine closure.

Factors influencing the metalliferous sector

Commodity prices

Overall there is an oversupply of mineral products and the lower economic growth in Europe, Asia and Japan has led to a decrease in world export prices for mineral products.

Export demand

It is foreseen that demand will increase for mineral products despite Asian economic downturn but prices will remain low.

Profitability

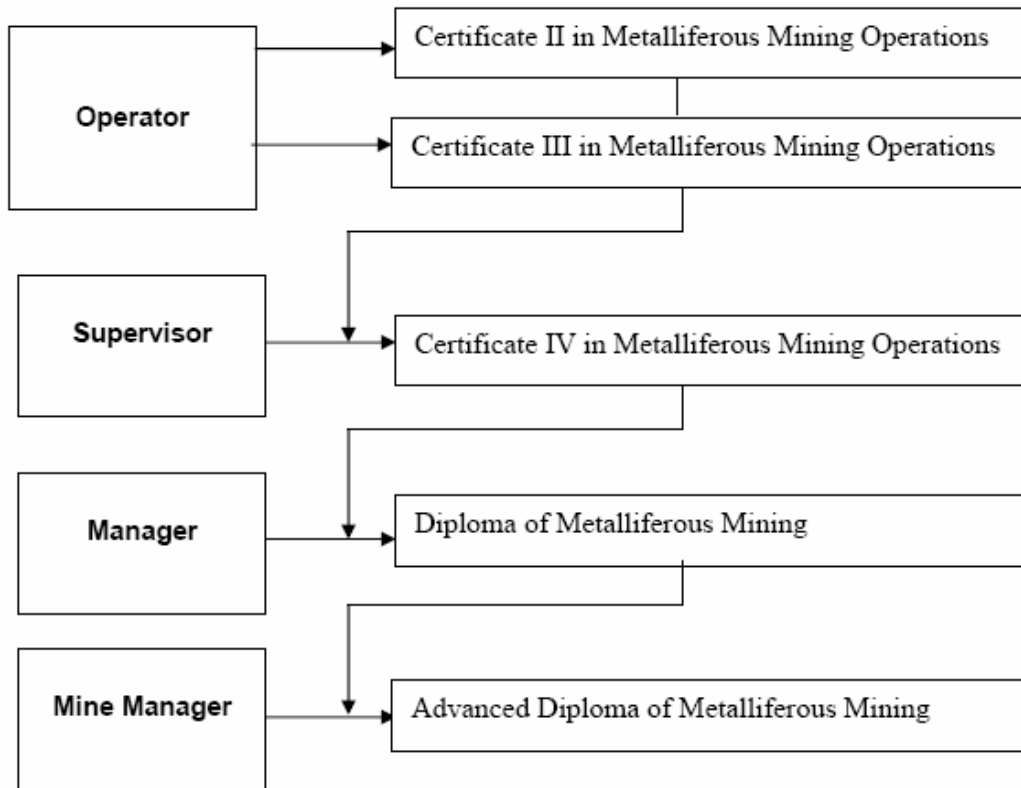
Increased production output, lower world commodity prices, and increased expenditure, has led to a significant drop in profits.

Changes in the metalliferous sector

Changes impacting on the metalliferous mining sector include:

- increasing rates of technological change
- geographical spread of operations
- remote locations with fly in and fly out operations
- complex nature of processes
- expanded scales of activity
- occupational health and safety and environmental legislation and Duty of Care
- wide spread introduction of quality systems
- composition of the workforce
- outsourcing of specific functions
- increasing use of contractors.

PATHWAYS TO A QUALIFICATION



Transition Arrangements

Registered Training Organisations (RTOs) are required to deliver Training Package qualifications within 12 months of endorsement of the Training Package by the National Training Quality Council (NTQC). A current accredited course, however, may be used until its accreditation expires.

Transition to New Qualifications

Students currently enrolled in a Training Package qualification in Metalliferous Mining should be permitted to complete the program they enrolled in initially, unless the move to the related qualification from a new/revised Training Package can be made without disadvantage to a student.

Funding

Some learners may only achieve a Statement of Attainment during their enrolment period with the RTO. Separate funding is not provided to assess the learner who has left his/her studies and then, at a later date, wants to complete an integrated assessment to achieve a certificate qualification. The RTO will be required to make special arrangements to issue the final qualification. This process may involve an invitation to the employer (if applicable) to participate in the assessment in the workplace.

Nominal Duration of Qualifications

The maximum nominal hours are identified for each Training Package qualification. Nominal hours may vary within a qualification depending on the units of competency selected and the delivery strategies used, however, training delivery will not be funded beyond the maximum nominal hours indicated. Nominal hours are for structured training only and include both delivery and assessment.

Definition of nominal hours (supervised)

The hours of supervised learning or training deemed necessary to cover the educational material in a training program when undertaken in standard classroom delivery mode. (*Source: A Glossary of Australian Vocational Education and Training Terms*).

Licensing Requirements

Shot Firing

To be designated/appointed under any statutory requirements as a shot firer, units of competency should be demonstrated to meet the State/Territory licensing requirements. State licensing requirements need to be confirmed by the Registered Training Organisation delivering and/or assessing the competency.

As there is no single national requirement for a shot firer, a statement has been added to each relevant qualification which emphasises that units of competency need to be chosen to meet the State/Territory licensing requirements. The qualifications where shot firing statements have been added are:

- Certificate II in Metalliferous Mining (Open Cut) MNM20103
- Certificate III in Metalliferous Mining (Open Cut) MNM30103
- Certificate II in Metalliferous Mining (Underground) MNM20203
- Certificate III in Metalliferous Mining (Underground) MNM30203

Assessment Guidelines

Assessment Guidelines are one of the endorsed components of the Metalliferous Mining Training Package. See volume 1 of the Training Package.

Learning Resources and Assessment Materials

Learning resources and/or assessment materials make up the non-endorsed components of the Training Package. There is a range of learning resources for the Metalliferous Mining Training Package currently available and under development.

A number of assessment related resources are also available from:

- The VET Teaching and Learning Branch of the Department of Education and Training;
- The Australian National Training Authority;
- Australian Training Products.

Trainers should consider the use of existing resources and/or resources sourced from a third party carefully, as some may need to be modified to suit the learning and assessment strategy developed by the RTO. In particular, resources previously used for training and assessment against accredited modules may not be suitable for the Units of competency without modification.

For further details contact either *Australian Training Products*. Contact details appear on [Obtaining the Training Package](#) on page 6 of this Guide.

Qualifications and Nominal Hours

The following table provides a summary of the qualifications and nominal hours in the Metalliferous Mining Training Package MNM99 version 3.

Code	Training Package Qualification Title	Maximum Nominal Hours	Previous Hours
MNM20103	Certificate II in Metalliferous Mining Operations (Open Cut)	320	330
MNM20203	Certificate II in Metalliferous Mining Operations (Underground)	360	290
MNM20303	Certificate II in Metalliferous Mining Operations (Processing)	340	350
MNM30103	Certificate III in Metalliferous Mining Operations (Open Cut)	530	560
MNM30203	Certificate III in Metalliferous Mining Operations (Underground)	805	670
MNM30303	Certificate III in Metalliferous Mining Operations (Processing)	590	660
MNM40103	Certificate IV in Metalliferous Mining Operations (Open Cut)	1130	1065
MNM40203	Certificate IV in Metalliferous Mining Operations (Underground)	1100	1000
MNM40303	Certificate IV in Metalliferous Mining Operations (Processing)	1030	850
MNM50299	Diploma of Metalliferous Mining (Open Cut And Underground)	1120	1125
MNM50399	Diploma of Metalliferous Mining (Processing)	920	920
MNM60101	Advanced Diploma of Metalliferous Mining	1000	n/a

Units of Competency and Nominal Hours

The following table provides a summary of the units of competency and nominal hours in the Metalliferous Mining Training Package MNM99 version 3.

Unit Code	Unit Title	Nominal Hours
1 Metalliferous Core Competencies		
MNMCCCOO001A	Communicate in the workplace	20
MNMCCCO1002A	Work Safely	20
MNMCCCOO003A	Plan and organise individual work	20
MNMCCCOO004A	Contribute to quality work outcomes	20
MNMCCCOO005A	Apply local risk control processes	20
MNMCCCOO006A	Perform initial response first aid	20
2 Extraction Open Cut Competencies		
MNMOCC101A	Set-up and prepare for drilling operations	40
MNMOCC1102A	Drill in open cut environment	60
MNMOCC103A	Prepare for blasting	60
MNMOCC104A	Conduct blasting operations	50
MNMOCC105A	Install ground support	30
MNMOCC201A	Conduct excavator operations	60
MNMOCC202A	Conduct electric rope shovel operations	60
MNMOCC203A	Conduct hydraulic shovel operations	60
MNMOCC1206A	Conduct shovel/excavator operations	60
MNMOCC1207A	Conduct front end loader operations	65
MNMOCC1208A	Conduct truck operations	60
MNMOCC1209A	Conduct dozer operations	60
MNMOCC1210A	Conduct scraper operations	60
MNMOCC1211A	Conduct loading and hauling support equipment operations	40
MNMOCC1212A	Conduct conveyor operations	20
MNMOCC213A	Conduct slurry pump operations	20
MNMOCC314A	Prepare for dredging operations	30
MNMOCC315A	Conduct dredging operations	50
MNMOCC316A	Shut down dredge for maintenance	40
MNMOCC417A	Construct and maintain roads	60
MNMOCC1418A	Transport plant, equipment and personnel	30
MNMOCC419A	Suppress dust in open cut environment	20
MNMOCC420A	Position and setup mobile lighting	10
MNMOCC1421A	Operate from elevated work platform	20
MNMOCC1422A	Operate roller/compactor	20
MNMOCC1423A	Operate forklift	30
MNMOCC1424A	Conduct crane operations	40
MNMOCC1425A	Conduct grader operations	60
MNMOCC426A	Operate light vehicle	40
MNMOCC427A	Recover equipment	20
MNMOCC428A	Operate mine services vehicle	30
MNMOCC429A	Undertake dewatering activities	20
MNMOCC530A	Move and position materials to form stockpiles	30
MNMOCC531A	Maintain stockpiles	20
MNMOCC532A	Blend stockpile materials	20
MNMOCC533A	Break oversize rock	20
MNMOCC534A	Recontour site	20
MNMOCC635A	Profile soil	20
MNMOCC636A	Construct drains and berms	40

Unit Code	Unit Title	Nominal Hours
MNMOCC637A	Undertake contour ripping	20
MNMOCC638A	Undertake direct seeding	20
MNMOCC639A	Plant seedlings	20
MNMOCC640A	Install reticulation systems	30
MNMOCC641A	Monitor and maintain vegetation	20
MNMOCC642A	Stockpile and maintain topsoil	20
MNMOCC643A	Identify and assess environmental and heritage concerns	20
MNMOCC220A	Apply operational maintenance skills	40
MNMOCC221A	Service mine plant and equipment	40
3 Extraction Underground Competencies		
MNMUGC1101A	Set up & prepare for ground support	20
MNMUGC1102A	Install ground support – bolting and meshing	60
MNMUGC103A	Set-up and prepare for drilling operations	15
MNMUGC104A	Conduct underground production drilling	30
MNMUGC105A	Conduct underground development drilling	30
MNMUGC106A	Conduct raise bore drilling	50
MNMUGC107A	Conduct diamond drilling	60
MNMUGC108A	Maintain magazine	20
MNMUGC118A	Charge underground blasts	60
MNMMNI401A	Administer shotfiring activities	60
MNMMNI301A	Apply shotfiring	60
MNMMNI402A	Fire shots	60
MNMUGC120A	Apply shot-crete	60
MNMUGC121A	install sets	60
MNMUGC124A	Conduct airleg mining	60
MNMUGC112A	Conduct wet filling activities	20
MNMUGC213A	Conduct load, haul, dump operations	30
MNMUGC214A	Conduct truck operations	20
MNMUGC215A	Conduct conveyor operations	20
MNMUGC1216A	Conduct skip operations	20
MNMUGC1217A	Operate automated winder	20
MNMUGC1218A	Operate manual winder	60
MNMUGC219A	Conduct rail haulage operations	30
MNMUGC220A	Conduct line of sight remote operations	30
MNMUGC221A	Conduct tele remote operations	30
MNMUGC222A	Conduct control room operations	40
MNMUGC223A	Conduct slurry pump operations	30
MNMUGC224A	Conduct cage operations	40
MNMUGC225A	Operate winder for shaft sinking	60
MNMUGC226A	Maintain winder equipment	60
MNMUGC227A	Inspect and maintain shafts and structures	40
MNMUGC228A	Monitor, inspect and service ropes and attachments	40
MNMUGC424A	Construct and maintain underground roads	40
MNMUGC425A	Operate from elevated work platform	20
MNMUGC426A	Conduct crane operations underground	35
MNMUGC427A	Conduct grader operations	30
MNMUGC428A	Operate roller/compactor	20
MNMUGC429A	Conduct equipment recovery operations	30
MNMUGC430A	Undertake towing underground	20
MNMUGC431A	Conduct integrated tool carrier operations	20
MNMUGC432A	Operate equipment services vehicle underground	20

Unit Code	Unit Title	Nominal Hours
MNMUGC433A	Undertake dewatering activities	20
MNMUGC434A	Transport plant, equipment and personnel	20
MNMUGC435A	Install and maintain reticulation systems	20
MNMUGC436A	Install and maintain vent	30
MNMUGC437A	Install and remove a secondary fan	20
MNMUGC438A	Conduct remote controlled equipment recovery operations	30
MNMUGC439A	Conduct mechanical scaling	30
MNMUGC440A	Set-up and perform manual scaling operations	20
MNNMNI303A	Handle and transport explosives	30
MNMUGC442A	Operate light vehicle underground	50
MNMUGC443A	Refuel vehicles/machines underground	20
MNMUGC542A	Maintain underground stockpiles	20
MNNMNI302A	Conduct secondary firing	20
4 Processing Competencies		
MNMPRD101A	Commission / Recommission plant	60
MNMPRD102A	Conduct conveyor operations	20
MNMPRD103A	Conduct drying activities	30
MNMPRD104A	Conduct pump operations	20
MNMPRD105A	Conduct valve operations	20
MNMPRD106A	Decommission Plant	60
MNMPRD107A	Distribute tailings	20
MNMPRD108A	Handle reagents	30
MNMPRD109A	Monitor and control boiler operation	30
MNMPRD1110A	Monitor tailings dam environment	20
MNMPRD111A	Operate compressors	20
MNMPRD112A	Operate fluid mixing equipment	20
MNMPRD113A	Operate heat exchangers	30
MNMPRD1114A	Perform process control room operations	60
MNMPRD115A	Respond to an unplanned shut down	30
MNMPRD116A	Take samples	40
MNMPRD117A	Maintain auxiliary plant and equipment operation	50
MNMPRD217A	Blend stockpile materials	20
MNMPRD218A	Break oversize rock	20
MNMPRD219A	Conduct crushing and screening	40
MNMPRD220A	Conduct milling/grinding	40
MNMPRD221A	Maintain stockpiles	20
MNMPRD222A	Move and position materials to form stockpiles	20
MNMPRD223A	Operate raw material feed systems	20
MNMPRD224A	Operate and monitor filter processes	40
MNMPRD324A	Conduct aeration process	40
MNMPRD325A	Conduct calcination activities	25
MNMPRD326A	Conduct digestion process	40
MNMPRD327A	Conduct precipitation operations	40
MNMPRD328A	Conduct reduction process	40
MNMPRD329A	Conduct roasting operations	40
MNMPRD330A	Conduct bacterial oxidation	40
MNMPRD331A	Conduct filtering process	25
MNMPRD332A	Conduct flotation process	50
MNMPRD333A	Conduct heavy media separation	40
MNMPRD334A	Conduct high tension separation	30
MNMPRD335A	Conduct leaching process	40

Unit Code	Unit Title	Nominal Hours
MNMPRD336A	Conduct magnetic separation	30
MNMPRD337A	Conduct pressure oxidation	40
MNMPRD338A	Conduct thickening and clarifying process	20
MNMPRD339A	Conduct wet gravity separation	30
MNMPRD440A	Conduct electrowinning/electrofining operations	40
MNMPRD441A	Conduct elution processes	40
MNMPRD442A	Conduct gold room operations	40
MNMPRD443A	Conduct solvent extraction	40
MNMPRD444A	Prepare and carry-out electrolytic cleaning process	25
MNMPRD445A	Prepare for pelletising activities	15
MNMPRD446A	Prepare for sintering activities	15
MNMPRD447A	Produce pellets	15
MNMPRD448A	Sinter materials	15
MNMPRD449A	Undertake tank-farming	20
MNMPRD450A	Monitor casting quality	50
MNMPRD550A	Cast a blast furnace	35
MNMPRD551A	Cast ingots	20
MNMPRD552A	Operate a blast furnace	50
MNMPRD1553A	Operate furnaces	40
MNMPRD554A	Operate converters	50
MNMPRD555A	Supply molten metal and additives to furnaces	50
MNMPRD556A	Tap furnaces	50
MNMPRD557A	Control molten metal in holding furnace/vessel	50
MNMPRD558A	Monitor and control furnace combustion gases	50
MNMPRD654A	Conduct acid plant operations	40
MNMPRD655A	Conduct air cleaning activities	40
MNMPRD656A	Monitor and co-ordinate waste water treatment processes	50
MNMPRD657A	Monitor and operate waste water treatment processes	40
MNMPRD658A	Reclaim and treat water systems	20
MNMPRD759A	Check and evaluate records and documentation	25
MNMPRD760A	Complete import/export documentation	25
MNMPRD761A	Connect and disconnect reefer units	20
MNMPRD762A	Maintain container/bulk cargo records	20
MNMPRD763A	Organise and monitor wharf/terminal operations	10
MNMPRD764A	Bulk package and store product	20
MNMPRD765A	Prepare and load for transport	30
MNMPRD766A	Process movement of containers and cargo	30
MNMPRD767A	Secure cargo	20
MNMPRD768A	Transfer cargo	20
MNMPRD169A	Operate gantry crane	20
MNMPRD170A	Conduct non-slewing crane operations	20
MNMPRD171A	Conduct slewing crane operations	50
MNMPRD172A	Operate vehicle loading crane	20
5 Geo Technical Survey and Environmental Management Competencies		
MNMAAA301A	Operate and maintain instruments and field equipment	120
MNMAAA302A	Plan and undertake field trip	120
MNMAAA303A	Conduct fieldwork	160
MNMAAA304A	Collect and prepare samples	80

Unit Code	Unit Title	Nominal Hours
MNMAAA305A	Perform geoscientific tests and analyses in the field and laboratory	160
MNMAAA306A	Process data and maintain accurate records	80
MNMBEB307A	Develop site environmental policy	80
MNMBEB308A	Undertake process or project environmental impact assessment	80
MNMBEB309A	Implement mine operations environmental management system	80
MNMBEB310A	Take environmental samples and measurements	80
MNMBEB311A	Monitor and correct activities having impact on the environment	50
MNMBEB312A	Review environmental management system performance	50
6 Mine Management Services Competencies		
MNMF5FX01A	Implement and maintain statutory/legal compliance systems	80
MNMF5FX02A	Implement and maintain pit development system	80
MNMF5FX03A	Implement and maintain surface mining operations	80
MNMF5FX04A	Select and commission surface mining operations plant and equipment	80
MNMF5FX05A	Plan, conduct and oversee drilling operations	60
MNMF5FX06A	Manage blasting operations	60
MNMF5FX07A	Plan and monitor water management	80
MNMF5FX08A	Plan and monitor recycled materials operation	40
MNMF5FX09A	Design stockpile formations and recycling systems	40
MNMF5FX10A	Develop, implement and maintain process control systems	60
MNMF5FX11A	Implement the ventilation management system	80
MNMF5FX12A	Implement the strata management system	80
MNMF5FX13A	Implement mine transport systems and production equipment	60
MNMF5FX14A	Implement mine services systems	60
MNMF5FX15A	Implement mine fixed plant and infrastructure systems	80
MNMF5FX16A	Implement emergency preparedness and response systems	80
MNMF5FX18A	Apply, monitor, rectify and report statutory/legal compliance systems	80
MNMF5FX19A	Apply, monitor and report pit development systems	80
MNMF5FX20A	Lead and monitor surface mining operations and report outcomes	80
MNMF5FX21A	Apply and monitor the ventilation management system	80
MNMF5FX22A	Apply and monitor systems for stable mining	80
MNMF5FX23A	Apply and monitor mine transport systems and production equipment	80
MNMF5FX24A	Apply and monitor mine services systems	80
MNMF5FX25A	Apply and monitor mine fixed plant and infrastructure systems	80

Unit Code	Unit Title	Nominal Hours
MNMF5FX26A	Apply and monitor emergency preparedness and response systems	80
MNMF5FX27A	Facilitate the risk management process	80
7 Mine Managers Competencies (General and Technical)		
MNIL02A	Establish and manage environmental management policies, plans and procedures	60
MNIL03A	Establish and Manage the Management information System	50
MNIL04A	Establish operational strategies	50
MNIL05A	Manage the decision making process	40
MNIL06A	Provide leadership	40
MNIL07A	Manage organisational change	60
MNIL08A	Manage group process	40
MNIL09A	Manage major incidents and emergencies	80
MNIL10A	Evaluate and respond to business influences	50
MNIL11A	Resource minesite plans and objectives	80
MNIL12A	Evaluate and enhance minesite performance	50
MNIL13A	Initiate, monitor and supervise contracts	60
MNIL14A	Establish and implement operational management plans	60
MNIL15A	Manage customer service	50
MNIL16A	RESERVED	
MNIL17A	Conduct business negotiations	50
MNIC01A	Establish the mine statutory/legal compliance system	100
MNIC02A	Establish the mine risk assessment and control system	80
MNIC03A	Establish mine infrastructure and plant systems	80
MNIC04A	Establish mine services systems	80
MNIC05A	Establish plant, equipment and infrastructure maintenance systems	60
MNIC06A	Establish the mine water management system	60
MNIC07A	Establish the stockpile management systems	60
MNIC08A	Establish waste and by product management system	60
MNIC09A	Establish and manage the mine occupational health and safety system	60
MNIC10A	Establish the mine emergency systems	80
MNIC11A	Establish a blasting system	80
MNIC12A	Establish mine closure management systems	60
MNIS01A	Establish ground control and slope stability systems	80
MNIS02A	Establish surface product haulage and transport systems	80
MNIU01A	Establish ground control and stable mining systems	80
MNIU02A	Establish the ventilation management system	60
MNIU03A	Establish underground product haulage and transport systems	80
8 Imported Units		
MNQ.TL/08A	Implement and monitor quality system	30
Safety Co-ordination		
MNC042A	Examine and maintain mine safety	80
Training		

Unit Code	Unit Title	Nominal Hours
BSZ404A*	Train small groups	30
BSZ405A*	Plan and promote a training program	50
BSZ406A*	Plan a series of training sessions	30
BSZ407A*	Deliver training sessions	50
BSZ408A*	Review training	15
BSZ501A*	Analyse competency requirements	50
BSZ502A*	Design and establish the training system	40
BSZ504A*	Manage training and assessment system	40
BSZ505A*	Evaluate the training and assessment system	45
BSZ508A*	Design training courses	40
Assessment		
BSZ401A*	Plan assessment	15
BSZ402A*	Conduct assessment	15
BSZ403A*	Review assessment	5
BSZ503A*	Design and establish the assessment system	40
BSZ506A*	Develop assessment procedures	25
BSZ507A*	Develop assessment tools	25
Supervision - Front Line Management		
BSBCMN402A	Develop work priorities	30
BSBCMN404A	Develop teams and individuals	40
BSBFLM402A	Show leadership in the workplace	50
BSBFLM403A	Manage effective workplace relationships	50
BSBFLM404A	Lead work teams	50
BSBFLM405A	Implement operational plan	50
BSBFLM406A	Implement workplace information system	50
BSBFLM409A	Implement continuous improvement	50
BSBCMN410A	Coordinate implementation of customer service strategies	30
BSBCMN411A	Monitor a safe workplace	40
BSBCMN412A	Promote innovation and change	30
Quality		
BSXFMI307A	Manage quality customer service	40
BSXFMI309A	Implement and monitor continuous improvement systems and processes	40
Supervision - Front Line Management initiative		
BSXFMI301A	Manage personal work priorities and professional development	40
BSXFMI302A	Provide leadership in the workplace	40
BSXFMI303A	Establish and manage effective workplace relationships	40
BSXFMI304A	Participate in, lead and facilitate work team	40
BSXFMI305A	Manage operations to achieve planned outcomes	40
BSXFMI306A	Manage workplace information	40
BSXFMI308A	Develop and maintain a safe workplace and environment	40
BSXFMI310A	Facilitate and capitalise in change and innovation	40
BSXFMI311A	Contribute to the development of workplace learning	15
Production Plant		
UTPNEG154A	Operate Electrostatic Precipitator Dust Collection Plant	50

* be replaced by mapped units of competency when the Training and Assessment Training Package is endorsed.

Training Package Qualifications which Replace Qualifications from an Earlier Version of a Training Package

The following table provides an overview of the qualifications which replace an earlier version of the Training Package.

Current Qualification	Replacement Qualification
MNM20199 Certificate II in Metalliferous Mining Operations (Open Cut)	MNM20103 Certificate II in Metalliferous Mining Operations (Open Cut)
MNM20299 Certificate II in Metalliferous Mining Operations (Underground)	MNM20203 Certificate II in Metalliferous Mining Operations (Underground)
MNM20399 Certificate II in Metalliferous Mining Operations (Processing)	MNM20303 Certificate II in Metalliferous Mining Operations (Processing)
MNM30199 Certificate III in Metalliferous Mining Operations (Open Cut)	MNM30103 Certificate III in Metalliferous Mining Operations (Open Cut)
MNM30299 Certificate III in Metalliferous Mining Operations (Underground)	MNM30203 Certificate III in Metalliferous Mining Operations (Underground)
MNM30399 Certificate III in Metalliferous Mining Operations (Processing)	MNM30303 Certificate III in Metalliferous Mining Operations (Processing)
MNM40199 Certificate IV in Metalliferous Mining Operations (Open Cut)	MNM40103 Certificate IV in Metalliferous Mining Operations (Open Cut)
MNM40299 Certificate IV in Metalliferous Mining Operations (Underground)	MNM40203 Certificate IV in Metalliferous Mining Operations (Underground)
MNM40399 Certificate IV in Metalliferous Mining Operations (Processing)	MNM40303 Certificate IV in Metalliferous Mining Operations (Processing)
MNM50299 Diploma of Metalliferous Mining (Open Cut And Underground)	MNM50299 V2 Diploma of Metalliferous Mining (Open Cut And Underground)
MNM50399 Diploma of Metalliferous Mining (Processing)	MNM50399 V2 Diploma of Metalliferous Mining (Processing)
new	MNM60101 Advanced Diploma of Metalliferous Mining

Traineeships

The following table provides a summary of the qualifications in the Metalliferous Mining Training Package MNM99 version 3 and the accredited traineeship courses they will replace.

Current Traineeship Qualification	Replacement Traineeship Qualification
MNM20199 Certificate II in Metalliferous Mining Operations (Open Cut) M066 Nominal Hours: 330	MNM20103 Certificate II in Metalliferous Mining Operations (Open Cut) Nominal Hours: 320
MNM20299 Certificate II in Metalliferous Mining Operations (Underground) M067 Nominal Hours: 290	MNM20203 Certificate II in Metalliferous Mining Operations (Underground) Nominal Hours: 360
MNM20399 Certificate II in Metalliferous Mining Operations (Processing) M068 Nominal hours: 350	MNM20303 Certificate II in Metalliferous Mining Operations (Processing) Nominal Hours: 340
MNM30199 Certificate III in Metalliferous Mining Operations (Open Cut) M069 Nominal Hours: 560	MNM30103 Certificate III in Metalliferous Mining Operations (Open Cut) Nominal Hours: 530
MNM30299 Certificate III in Metalliferous Mining Operations (Underground) M070 Nominal Hours: 670	MNM30203 Certificate III in Metalliferous Mining Operations (Underground) Nominal Hours: 805
MNM30399 Certificate III in Metalliferous Mining Operations (Processing) M071 Nominal Hours: 660	MNM30303 Certificate III in Metalliferous Mining Operations (Processing) Nominal Hours: 590
MNM40299 Certificate IV in Metalliferous Mining Operations (Underground) M073 Nominal Hours: 1000	MNM40203 Certificate IV in Metalliferous Mining Operations (Underground) Nominal Hours: 1100

Examples of Training Package Programs

Units of competency may be customised so that the tasks involved in demonstrating competence are designed to meet the requirements of an individual enterprise or to satisfy regulations in a particular state or territory.

Each qualification in the Metalliferous Mining Training Package MNM99 version 3 may be customised to meet the context in which the training is taking place. A qualification can also be customised to accommodate a learner's chosen career pathway.

The following are examples of suitable training programs for Metalliferous Mining Training Package MNM99 version 3. The models are not intended to be prescriptive but illustrate ways that qualifications can be achieved.

Training Program 1: Certificate II in Metalliferous Mining Operations (Open Cut)

Qualification Title	Certificate II in Metalliferous Mining Operations (Open Cut)
Qualification Code	MNM20103
Qualification Summary	<p>This qualification reflects the role of employees in mining operations who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.</p> <p>The worker will normally be engaged in a workplace in which they:</p> <ul style="list-style-type: none"> ▪ 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
Qualification Packaging Rules	<p>Successful completion of a total of twelve (12) units of competency made up of:</p> <ul style="list-style-type: none"> • seven (7) mandatory units of competency, and • five (5) electives units of which: <ul style="list-style-type: none"> • a minimum of three (3) units are drawn from the specified Metalliferous Mining Extraction Underground units listed, and • a maximum of two (2) units, relevant to the job function from other endorsed Training Package

Unit Code	Unit Title	Nominal Hours
Mandatory core units		
MNMCCCOO001A	Communicate in the workplace	20
MNMCCCO1002A	Work safely	20
MNMCCCOO003A	Plan and organise individual work	20
MNMCCCOO004A	Contribute to quality work outcomes	20
MNMCCCOO005A	Apply local risk control processes	20
MNMOCC426AA	Operate light vehicles	40
MNMOCC643A	Identify and assess environmental and heritage concerns	20
Elective Units		
MNMOCC1208A	Conduct truck operations	60
MNMOCC1212A	Conduct conveyor operations	20
MNMOCC213A	Conduct slurry pump operations	20
MNMOCC220A	Apply operational maintenance skills	40
MNMOCC1421A	Operate from elevated work platform	20
Other elective units that may be considered		
MNMCCCOO006A	Perform initial response first aid	20
MNMOCC105A	Install ground support	30
MNMOCC221A	Service mine plant and equipment	40
MNMOCC1418A	Transport plant, equipment and personnel	30
MNMOCC419A	Suppress dust in open cut environment	20
MNMOCC420A	Position and set up mobile lighting	10
MNMOCC1422A	Operate roller/compactor	20
MNMOCC1423A	Operate forklift	30
MNMOCC428A	Operate mine services vehicle	30
MNMOCC429A	Conduct dewatering activities	20
MNMOCC530A	Move and position materials to form stockpiles	30
MNMOCC533A	Break oversize rock	20
MNMOCC534A	Recontour site	20
MNMOCC635A	Profile soil	20
MNMOCC637A	Undertake contour ripping	20
MNMOCC638A	Undertake direct seeding	20
MNMOCC639A	Plant seedlings	20
MNMOCC641A	Monitor and maintain vegetation	20
MNMOCC642A	Stockpile and maintain topsoil	20
TOTAL		320

**Training Program 2:
Certificate II in Metalliferous Mining Operations (Underground)
MNM20203**

Qualification Title	Certificate II in Metalliferous Mining Operations (Underground)
Qualification Code	MNM20203
Qualification Summary	<p>This qualification reflects the role of employees in mining operations who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.</p> <p>The worker will normally be engaged in a workplace in which they:</p> <ul style="list-style-type: none"> ▪ 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 ▪ Take limited responsibility for their own outputs in work and learning.
Qualification Packaging Rules	<p>Successful completion of a total of fourteen (14) units of competency made up of:</p> <ul style="list-style-type: none"> • eight (8) mandatory units of competency • six (6) electives units of which: <ul style="list-style-type: none"> a minimum of four (4) units are drawn from the specified Metalliferous Mining Extraction Underground units listed, and a maximum of two (2) units, relevant to the job function from other endorsed Training Packages

Unit Code	Unit Title	Nominal Hours
Core Units		

MNMCCCO001A	Communicate in the workplace	20
MNMCCCO1002A	Work safely	20
MNMCCCO0003A	Plan and organise individual work	20
MNMCCCO0004A	Contribute to quality work outcomes	20
MNMCCCO0005A	Apply local risk control processes	20
MNMUGC432A	Operate equipment services vehicle underground	20
MNMUGC434A	Transport plant, equipment and personnel	20
MNMUGC440A	Set-up and perform manual scaling operations	20

Elective Units

MNMCCCO0006A	Perform initial response first aid	20
MNMUGC1101A	Set up and prepare for ground support	20
MNMUGC1102A	Conduct ground support- bolting and meshing	60
MNMUGC108A	Maintain magazine	20
MNMUGC112A	Conduct wet filling activities	20
MNMUGC120A	Apply shot-crete	60

Other elective units that may be considered

MNMUGC213A	Conduct load, haul, dump operations	30
MNMUGC214A	Conduct truck operations	20
MNMUGC215A	Conduct conveyor operations	20
MNMUGC223A	Conduct slurry pump operations	30
MNMUGC425A	Operate from elevated work platform	20
MNMUGC428A	Operate roller/compactor	20
MNMUGC430A	Undertake towing underground	20
MNMUGC431A	Conduct integrated tool carrier operations	20
MNMUGC433A	Undertake de-watering activities	20
MNMUGC435A	install and maintain reticulation systems	20
MNMUGC437A	Install and remove secondary fan	20
MNMMNI303A	Handle and transport explosives	30
MNMUGC442A	Operate light vehicle underground	50
MNMUGC443A	Refuel vehicles/machines underground	20
TOTAL		360

**Training Program 3:
Certificate II in Metalliferous Mining Operations (Processing)
MNM20303**

Qualification Title	Certificate II in Metalliferous Mining Operations (Processing)
Qualification Code	MNM20303
Qualification Summary	<p>This qualification reflects the role of employees in mining operations who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.</p> <p>The worker will normally be engaged in a workplace in which they:</p> <ul style="list-style-type: none"> ▪ 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 ▪ Take limited responsibility for their own outputs in work and learning.
Qualification Packaging Rules	<p>Successful completion of a total of fifteen (15) units of competency made up of:</p> <ul style="list-style-type: none"> • five (5) mandatory core units of competency • ten (10) electives units of which <ul style="list-style-type: none"> - a minimum of seven (7) units are drawn from the specified Metalliferous Mining Processing units listed, and - a maximum of three (3) units, relevant to the job function from other endorsed Training Packages

Unit Code	Unit Title	Nominal Hours
Core Units		
MNMCCCO001A	Communicate in the workplace	20
MNMCCCO1002A	Work safely	20
MNMCCCO0003A	Plan and organise individual work	20
MNMCCCO0004A	Contribute to quality work outcomes	20
MNMCCCO0005A	Apply local risk control processes	20
Elective Units		
MNMPRD105A	Conduct valve operations	20
MNMPRD102A	Conduct conveyor operations	20
MNMCCCO0006A	Perform initial response first aid	20
MNMPRD107A	Distribute tailings	20
MNMPRD108A	Handle reagents	30
MNMPRD1110A	Monitor tailings dam environment	20
MNMPRD111A	Operate compressors	20
MNMPRD112A	Operate fluid mixing equipment	20
MNMPRD113A	Operate heat exchangers	30
MNMPRD116A	Take samples	40
Other elective units that may be considered		
MNMPRD104A	Conduct pump operations	20
MNMPRD117A	Maintain auxiliary plant and equipment operation	50
MNMPRD169A	Operate gantry crane	20
MNMPRD170A	Conduct non-slewing crane operations	20
MNMPRD171A	Conduct slewing crane operations	50
MNMPRD172A	Operate vehicle loading crane	20
MNMPRD217A	Blend stockpile materials	20
MNMPRD218A	Break oversize rock	20
MNMPRD221A	Maintain stockpiles	20
MNMPRD222A	Move and position materials to form stockpiles	20
MNMPRD223A	Operate raw material feed systems	20
MNMPRD324A	Conduct aeration process	40
MNMPRD326A	Conduct digestion process	40
MNMPRD327A	Conduct precipitation operations	40
MNMPRD328A	Conduct reduction process	40
MNMPRD329A	Conduct roasting operations	40
MNMPRD443A	Conduct solvent extraction	40
MNMPRD444A	Prepare and carry out electrolytic cleaning process	25
MNMPRD445A	Prepare for pellatising activities	15
MNMPRD446A	Prepare for sintering activities	15
MNMPRD447A	Produce pellets	15
MNMPRD448A	Sinter materials	15
MNMPRD449A	Undertake tank-farming	20
MNMPRD654A	Conduct acid plant operations	40
MNMPRD655A	Conduct air cleaning activities	40
MNMPRD657A	Monitor and operate waste water treatment processes	40
MNMPRD658A	Reclaim and treat water systems	20
MNMPRD761A	Connect and disconnect reefer units	20
MNMPRD764A	Bulk package and store products	20
MNMPRD765A	Prepare and load for transport	30
MNMPRD767A	Secure cargo	20
MNMPRD768A	Transfer cargo	20
TOTAL		340

Training Program 4: Certificate III in Metalliferous Mining (Open Cut) MNM30103

Qualification Title	Certificate III in Metalliferous Mining (Open Cut)
Qualification Code	MNM30103
Qualification Summary	<p>This qualification reflects the role of employees in mining operations who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.</p> <p>The worker will normally be engaged in a workplace in which they:</p> <ul style="list-style-type: none"> • 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.
Qualification Packaging Rules	<p>Successful completion of a total of seventeen (17) units of competency made up of:</p> <ul style="list-style-type: none"> • twelve (12) units of competency satisfying the criteria for the Certificate II in Metalliferous Mining Operations (Open Cut), <p>PLUS</p> <ul style="list-style-type: none"> • five (5) electives units of which: <ul style="list-style-type: none"> - a minimum of three (3) units are drawn from those listed, and - a maximum of two (2) units, relevant to the job function from other endorsed Training Packages

Unit Code	Unit Title	Nominal Hours
Core Units		
MNMCCCO001A	Communicate in the workplace	20
MNMCCCO1002A	Work safely	20
MNMCCCO0003A	Plan and organise individual work	20
MNMCCCO0004A	Contribute to quality work outcomes	20
MNMCCCO0005A	Apply local risk control processes	20
MNMOCC426AA	Operate light vehicles	40
MNMOCC643A	Identify and assess environmental and heritage concerns	20
Elective Units Cert II		
MNMOCC1208A	Conduct truck operations	60
MNMOCC1212A	Conduct conveyor operations	20
MNMOCC213A	Conduct slurry pump operations	20
MNMOCC220A	Apply operational maintenance skills	40
MNMOCC1421A	Operate from elevated work platform	20
Elective Units Cert III		
MNMOCC417A	Construct and maintain roads	60
MNMMNI303A	Handle and transport explosives	30
MNMOCC1424A	Conduct crane operations	40
MNMOCC1425A	Conduct grader operations	60
MNMOCC427A	Recover equipment	20
Other Cert III Elective Units that may be considered		
MNMOCC101A	Set up and prepare for drilling operations	40
MNMOCC1102A	Drill in open cut environment	60
MNMMNI301A	Apply shotfiring	60
MNMMNI402A	Fire shots	60
MNMOCC201A	Conduct excavator operations	60
MNMOCC202A	Conduct electric rope shovel operations	60
MNMOCC203A	Conduct hydraulic shovel operations	60
MNMOCC1206A	Conduct shovel/excavator operations	60
MNMOCC1207A	Conduct front end loader operations	65
MNMOCC1209A	Conduct dozer operations	60
MNMOCC1210A	Conduct scraper operations	60
MNMOCC1211A	Conduct loading and hauling support operations	40
MNMOCC220A	Apply operational maintenance skills	40
MNMOCC221A	Service mine plant and equipment	40
MNMOCC314A	Prepare for dredging operations	30
MNMOCC315A	Conduct dredging operations	50
MNMOCC316A	Shut down dredge for maintenance	40
MNMOCC531A	Maintain stockpiles	20
MNMOCC532A	Blend stockpile materials	20
MNMMNI302A	Conduct secondary firing	20
MNMOCC636A	Construct drains and berms	40
MNMOCC640A	Install reticulations systems	30
TOTAL		530

Training Program 5: Certificate III in Metalliferous Mining Operations (Underground) MNM30203

Qualification Title	Certificate III in Metalliferous Mining Operations (Underground)
Qualification Code	MNM30203
Qualification Summary	<p>This qualification reflects the role of employees in mining operations who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.</p> <p>The worker will normally be engaged in a workplace in which they:</p> <ul style="list-style-type: none"> ▪ 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
Qualification Packaging Rules	<p>Successful completion of a total of twenty four (24) units of competency made up of:</p> <ul style="list-style-type: none"> • fourteen (14) units of competency satisfying the criteria for the Certificate II in Metalliferous Mining Operations (Underground), <p>Plus</p> <ul style="list-style-type: none"> • ten (10) electives units of which <ul style="list-style-type: none"> - a minimum of eight (8) units are drawn from the specified Metalliferous Mining Extraction Underground units listed, and - a maximum of two (2) units, relevant to the job function from other endorsed Training Packages

Unit Code	Unit Title	Nominal Hours
Core Units		
MNMCCCO001A	Communicate in the workplace	20
MNMCCCO1002A	Work safely	20
MNMCCCO0003A	Plan and organise individual work	20
MNMCCCO0004A	Contribute to quality work outcomes	20
MNMCCCO0005A	Apply local risk control processes	20
MNMUGC432A	Operate equipment services vehicle underground	20
MNMUGC434A	Transport plant, equipment and personnel	20
MNMUGC440A	Set-up and perform manual scaling operations	20
Elective Units		
MNMCCCO0006A	Perform initial response first aid	20
MNMUGC1101A	Set up and prepare for ground support	20
MNMUGC1102A	Conduct ground support- bolting and meshing	60
MNMUGC108A	Maintain magazine	20
MNMUGC112A	Conduct wet filling activities	20
MNMUGC120A	Apply shot-crete	60
MNMUGC103A	Set up and prepare for drilling operations	15
MNMUGC104A	Conduct underground production drilling	30
MNMUGC105A	Conduct underground development drilling	30
MNMUGC106A	Conduct raise bore drilling	50
MNMUGC108A	Maintain magazine	20
MNMMNI401A	Administer shotfiring activities	60
MNMMNI301A	Apply shotfiring	60
MNMMNI402A	Fire shots	60
MNMUGC121A	Install sets	60
MNMUGC124A	Conduct airleg mining	60
Other elective unit that may be considered		
MNMUGC1102A	Install ground support - bolting and meshing	60
MNMUGC107A	Conduct diamond drilling	60
MNMUGC1216A	Conduct skip operations	20
MNMUGC1217A	Operate automated winder	20
MNMUGC1218A	Operate manual winder	60
MNMUGC219A	Conduct rail haulage operations	30
MNMUGC220A	Conduct line of site operations	30
MNMUGC221A	Conduct tele remote operations	30
MNMUGC222A	Conduct control room operations	40
MNMUGC224A	Conduct cage operations	40
MNMUGC225A	Operate winder for shaft sinking	60
MNMUGC226A	Maintain winder equipment	60
MNMUGC227A	Inspect and maintain shafts and structures	40
MNMUGC228A	Monitor, inspect and service ropes and attachments	40
MNMUGC424A	Construct and maintain underground roads	40
MNMUGC426A	Conduct crane operations underground	35
MNMUGC427A	Conduct grader operations	30
MNMUGC436A	Install and maintain vent	30
MNMUGC438A	Conduct remote controlled equipment recovery operations	30
MNMUGC439A	Conduct mechanical scaling	30
MNMMNI303A	Handle and transport explosives	30
MNMMNI302A	Conduct secondary firing	20
TOTAL		805

Training Program 6: Certificate III in Metalliferous Mining (Processing) MNM30303

Qualification Title	Certificate III in Metalliferous Mining (Processing)
Qualification Code	MNM30303
Qualification Summary	<p>The Certificate III in Metalliferous Mining Operations - Processing reflects the role of employees in a mining operations who undertake a prescribed range of functions involving known routines and procedures and who take some responsibility for the quality of work outcomes.</p> <p>The worker will normally be engaged in a workplace in which they:</p> <ul style="list-style-type: none"> ▪ 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
Qualification Packaging Rules	<p>Successful completion of a total of twenty two (22) units of competency made up of:</p> <ul style="list-style-type: none"> • five (5) core units from the Certificate II in Metalliferous Mining Operations (Processing), PLUS • ten (10) elective units from the Certificate II in Metalliferous Mining Operations (Processing), PLUS • seven (7) electives units of which: <ul style="list-style-type: none"> - a minimum of five (5) units are drawn from the specified Metalliferous Mining Processing units listed, and - a maximum of two (2) units, relevant to the job function from other endorsed Training Packages

Unit Code	Unit Title	Nominal Hours
Core Units		
MNMCCCO001A	Communicate in the workplace	20
MNMCCCO1002A	Work safely	20
MNMCCCO0003A	Plan and organise individual work	20
MNMCCCO0004A	Contribute to quality work outcomes	20
MNMCCCO0005A	Apply local risk control processes	20
Elective Units		
MNMPRD105A	Conduct valve operations	20
MNMPRD102A	Conduct conveyor operations	20
MNMCCCO0006A	Perform initial response first aid	20
MNMPRD107A	Distribute tailings	20
MNMPRD108A	Handle reagents	30
MNMPRD1110A	Monitor tailings dam environment	20
MNMPRD111A	Operate compressors	20
MNMPRD112A	Operate fluid mixing equipment	20
MNMPRD113A	Operate heat exchangers	30
MNMPRD116A	Take samples	40
MNMPRD759A	Check and evaluate records and documentation	25
MNMPRD760A	Complete import/export documentation	25
MNMPRD762A	Maintain contain bulk cargo records	20
MNMPRD442A	Conduct gold room operations	40
MNMPRD450A	Monitor casting quality	50
MNMPRD332A	Conduct floatation process	50
MNMPRD333A	Conduct heavy media separation	40
Other elective units that may be considered		
MNMPRD103A	Conduct drying activities	30
MNMPRD109A	Monitor and control boiler operation	30
MNMPRD1114A	Perform process control room operations	60
MNMPRD115A	Respond to an unplanned shut down	30
MNMPRD219A	Conduct crushing and screening	40
MNMPRD220A	Conduct milling/grinding	40
MNMPRD224A	Operate and monitor filter processes	40
MNMPRD325A	Conduct calcination activities	25
MNMPRD330A	Conduct bacterial oxidation	40
MNMPRD331A	Conduct filtering process	25
MNMPRD335A	Conduct leaching process	40
MNMPRD336A	Conduct magnetic separation	30
MNMPRD337A	Conduct pressure oxidation	40
MNMPRD338A	Conduct thickening and clarifying process	20
MNMPRD339A	Conduct wet gravity separation	30
MNMPRD440A	Conduct electrowinning/electrofining operations	40
MNMPRD441A	Conduct elution processes	40
MNMPRD550A	Cast a blast furnace	35
MNMPRD551A	Cast ingots	20
MNMPRD552A	Operate a blast furnace	50
MNMPRD1553A	Operate furnaces	40
MNMPRD554A	Operate converters	50
MNMPRD555A	Supply molten metal and additives to furnaces	50
MNMPRD556A	Tap furnaces	50
MNMPRD557A	Control molten metal in holding furnace/vessel	50
MNMPRD558A	Monitor and control furnace combustion and gases	50
UTPPNEG154A	Operate electrostatic precipitator dust collection plant	50
TOTAL		590

Training Program 7: Certificate IV in Metalliferous Mining (Open Cut) MNM40103

Qualification Title	Certificate IV in Metalliferous Mining Operations (Open Cut)
Qualification Code	MNM40103
Qualification Summary	<p>This qualification reflects the role of employees in a mine site or other processing operations who perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for applying the site work instructions and practices to ensure the quantity and quality of the output of others and contribute to the development of technical solutions to non-routine problems.</p> <p>The worker will normally be engaged in a workplace in which they:</p> <ul style="list-style-type: none"> • 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, in some cases in depth • identify, analyse and evaluate information from a variety of sources • take responsibility for their own outputs in relation to specified quality standards • take limited responsibility for the quantity and quality of the output of others.
Qualification Packaging Rules	<p>Successful completion of a total of twenty one (21) units of competency made up of:</p> <ul style="list-style-type: none"> • fourteen (14) mandatory core units of competency • seven (7) electives units of which <ul style="list-style-type: none"> - a minimum of five (5) units are drawn from the specified Metalliferous Mining Extraction Open Cut units listed, and - a maximum of two (2) units, relevant to the job function from other endorsed Training Packages

Unit Code	Unit Title	Nominal Hours
Core Units		
MNMCCCOO001A	Communicate in the workplace	20
MNMCCCO1002A	Work safely	20
MNMCCCOO003A	Plan and organise individual work	20
MNMCCCOO004A	Contribute to quality work outcomes	20
MNMCCCOO005A	Apply local risk control processes	20
MNMF5FX18A	Apply, monitor, rectify and report statutory/legal compliance systems	80
MNMF5FX19A	Apply, monitor and report pit development systems	80
MNMF5FX22A	Apply and monitor systems for stable mining	80
MNMF5FX23A	Apply and monitor mine transport systems and production equipment	80
MNMF5FX24A	Apply and monitor mine services systems	80
MNMF5FX25A	Apply and monitor mine fixed plant and infrastructure systems	80
MNMF5FX26A	Apply and monitor emergency preparedness and response	80
MNMF5FX27A	Facilitate the risk management process	80
MNQ.TL/08A	Implement and monitor quality system	30
Elective Units		
MNMCCCOO006A	Perform initial response first aid	20
MNMMNI401A	Administer shotfiring activities	60
MNMF5FX20A	Lead and monitor surface mining operations and report outcomes	80
BSBFLM403A	Manage effective workplace relationships	50
BSBFLM404A	Lead work teams	50
BSBFLM405A	Implement operational plan	50
BSBFLM406A	Implement workplace information system	50
Other Elective Units that may be considered		
MNMF5FX21A	Apply and monitor the ventilation management system	80
MNCO42A	Examine and maintain mine safety	80
BSZ401A	Plan assessment	15
BSZ402A	Conduct assessment	15
BSZ404A	Train small groups	30
BSZ405A	Plan and promote a training program	50
BSZ406A	Plan a series of training sessions	30
BSZ407A	Deliver training sessions	50
BSZ408A	Review training	15
BSZ501A	Analyse competency requirements	50
BSZ507A	Develop assessment tools	25
BSZ508A	Design training courses	40
BSBCMN402A	Develop work priorities	30
BSBCMN404A	Develop teams and individuals	40
BSBCMN412A	Promote innovation and change	30
BSBFLM402A	Show leadership in the workplace	50
BSBFLM403A	Manage effective workplace relationships	50
BSBFLM404A	Lead work teams	50
BSBFLM405A	Implement operational plan	50
BSBFLM406A	Implement workplace information system	50
BSBFLM409A	Implement continuous improvement	50
BSBFLM410A	Coordinate implementation of customer service strategies	30
BSBCMN411A	Monitor a safe workplace	40
TOTAL		1130

**Training Program 8:
Certificate IV in Metalliferous Mining (Underground)
MNM40203**

Qualification Title	Certificate IV in Metalliferous Mining Operations (Underground)
Qualification Code	MNM40203
Qualification Summary	<p>This qualification reflects the role of employees in a mine site who perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for applying the site work instructions and practices to ensure the quantity and quality of the output of others and contribute to the development of technical solutions to non-routine problems.</p> <p>The worker will normally be engaged in a workplace in which they:</p> <ul style="list-style-type: none"> ▪ 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, in some cases in depth ▪ identify, analyse and evaluate information from a variety of sources ▪ take responsibility for their own outputs in relation to specified quality standards ▪ take limited responsibility for the quantity and quality of the output of others.
Qualification Packaging Rules	<p>Successful completion of a total of twenty one (21) units of competency made up of:</p> <ul style="list-style-type: none"> • fifteen (15) mandatory core units of competency • six (6) electives units of which <ul style="list-style-type: none"> - a minimum of four (4) units are drawn from the specified Metalliferous Mining Extraction Underground units listed, and - a maximum of two (2) units, relevant to the job function from other endorsed Training Packages

Unit Code	Unit Title	Nominal Hours
Core Units		
MNMCCCO001A	Communicate in the workplace	20
MNMCCCO1002A	Work safely	20
MNMCCCO003A	Plan and organise individual work	20
MNMCCCO004A	Contribute to quality work outcomes	20
MNMCCCO005A	Apply local risk control processes	20
MNMF5FX18A	Apply, monitor, rectify and report statutory/legal compliance systems	80
MNMF5FX21A	Apply and monitor the ventilation management system	80
MNMF5FX22A	Apply and monitor systems for stable mining	80
MNMF5FX23A	Apply and monitor mine transport systems and production equipment	80
MNMF5FX24A	Apply and monitor mine services systems	80
MNMF5FX25A	Apply and monitor mine fixed plant and infrastructure systems	80
MNMF5FX26A	Apply and monitor emergency preparedness and response	80
MNMF5FX27A	Facilitate the risk management process	80
MNMUGC429A	Conduct equipment recovery operations	30
MNQTL08A	Implement and monitor quality system	30
Elective Units		
BSBFLM402A	Show leadership in the workplace	50
BSBFLM403A	Manage effective workplace relationships	50
BSBFLM404A	Lead work teams	50
BSBFLM405A	Implement operational plan	50
BSBFLM406A	Implement workplace information system	50
BSBFLM409A	Implement continuous improvement	50
Other elective units that may be considered		
MNMCCCO006A	Perform initial response first aid	20
MNMF5FX19A	Apply, monitor and report pit development systems	80
MNMF5FX20A	Lead and monitor surface mining operations and report outcomes	80
MNCO42A	Examine and maintain mine safety	80
BSZ401A	Plan assessment	15
BSZ402A	Conduct assessment	15
BSZ404A	Train small groups	30
BSZ405A	Plan and promote a training program	50
BSZ406A	Plan a series of training sessions	30
BSZ407A	Deliver training sessions	50
BSZ408A	Review training	15
BSZ501A	Analyse competency requirements	50
BSZ507A	Develop assessment tools	25
BSZ508A	Design training courses	40
BSBCMN402A	Develop work priorities	30
BSBCMN404A	Develop teams and individuals	40
BSBCMN412A	Promote innovation and change	30
BSBFLM410A	Coordinate implementation of customer service strategies	30
BSBCMN411A	Monitor a safe workplace	40
TOTAL		1100

Training Program 9: Certificate IV in Metalliferous Mining (Processing) MNM40303

Qualification Title	Certificate IV in Metalliferous Mining Operations (Processing)
Qualification Code	MNM40303
Qualification Summary	<p>This qualification reflects the role of employees in a mine site who perform tasks involving a broad range of varied activities most of which are complex and non-routine. They are responsible for applying the site work instructions and practices to ensure the quantity and quality of the output of others and contribute to the development of technical solutions to non-routine problems.</p> <p>The worker will normally be engaged in a workplace in which they:</p> <ul style="list-style-type: none"> ▪ 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, in some cases in depth ▪ identify, analyse and evaluate information from a variety of sources ▪ take responsibility for their own outputs in relation to specified quality standards ▪ take limited responsibility for the quantity and quality of the output of others.
Qualification Packaging Rules	<p>Successful completion of a total of twenty one (21) units of competency made up of:</p> <ul style="list-style-type: none"> • eleven (11) mandatory units of competency • ten (10) electives units of which: <ul style="list-style-type: none"> - a minimum of seven (7) units are drawn from the specified Metalliferous Mining Processing units listed, and - a maximum of three (3) units, relevant to the job function from other endorsed Training Packages

Unit Code	Unit Title	Nominal Hours
Core Units		
MNMCCCOO001A	Communicate in the workplace	20
MNMCCCO1002A	Work safely	20
MNMCCCOO003A	Plan and organise individual work	20
MNMCCCOO004A	Contribute to quality work outcomes	20
MNMCCCOO005A	Apply local risk control processes	20
MNMF5FX18A	Apply, monitor, rectify and report statutory/legal compliance systems	80
MNMF5FX24A	Apply and monitor mine services systems	80
MNMF5FX25A	Apply and monitor mine fixed plant and infrastructure systems	80
MNMF5FX26A	Apply and monitor emergency preparedness and response	80
MNMF5FX27A	Facilitate the risk management process	80
MNQ.TL/08A	Implement and monitor quality system	30

Elective Units		
MNMCCCOO006A	Perform initial response first aid	20
MNMPRD101A	Commission/Recommission plant	60
MNMPRD106A	Decommission plant	60
MNMPRD656A	Monitor and co-ordinate waste water treatment processes	50
BSBCM411A	Monitor a safe workplace	40
MNMPRD766A	Process movement of containers and cargo	30
BSBFLM402A	Show leadership in the workplace	50
BSBFLM403A	Manage effective workplace relationships	50
BSBFLM404A	Lead work teams	50
MNC.O42.A	Examine and maintain mine safety	80
Other elective units that may be considered		
BSZ401A	Plan assessment	15
BSZ402A	Conduct assessment	15
BSZ404A	Train small groups	30
BSZ405A	Plan and promote a training program	50
BSZ406A	Plan a series of training sessions	30
BSZ407A	Deliver training sessions	50
BSZ408A	Review training	15
BSZ501A	Analyse competency requirements	50
BSZ507A	Develop assessment tools	25
BSZ508A	Design training courses	40
BSBCM402A	Develop work priorities	30
BSBCM404A	Develop teams and individuals	40
BSBCM412A	Promote innovation and change	30
BSBFLM405A	Implement operational plan	50
BSBFLM406A	Implement workplace information system	50
BSBFLM409A	Implement continuous improvement	50
BSBFLM410A	Coordinate implementation of customer service strategies	30
TOTAL		1110

**Training Program 10:
Diploma of Metalliferous Mining (Open Cut and Underground)
MNM50299V2**

Qualification Title	Diploma of Metalliferous Mining (Open Cut and Underground)
Qualification Code	MNM50299V2
Qualification Summary	This qualification will provide you with the practical skills and knowledge to manage the operations involved in the extraction and processing of materials. You will learn to perform specialised techniques and procedures used in the industry, and implement and observe statutory/legal compliance requirements, risk control processes, quality and continuous improvement processes, and emergency procedures. You will learn skills in the implementation and maintenance of a pit system, plan and monitor water management, and recycle materials operation. In addition to completing these subjects you will need to undertake several years of work based experience to meet all of the requirements of the qualification. The work experience will involve living and working on a mining lease.
Qualification Packaging Rules	Successful completion of a total of twenty one (21) units of competency with: <ul style="list-style-type: none"> ● Fourteen (14) core units being mandatory ● Seven (7) electives units of which: <ul style="list-style-type: none"> - all seven (7) units are drawn from the specified Metalliferous Mining Processing units listed, <p>OR</p> <ul style="list-style-type: none"> - a minimum of four (4) units are drawn from the specified Metalliferous Mining Processing units listed, and - a maximum of three (3) units, relevant to the job function from other endorsed Training Packages

Unit Code	Unit Title	Nominal Hours
Core Units		

MNMCCCOO001A	Communicate in the workplace	20
MNMCCCOO1002A	Work safely	20
MNMCCCOO003A	Plan and organise individual work	20
MNMCCCOO004A	Contribute to quality work outcomes	20
MNMCCCOO005A	Apply local risk control processes	20
MNMF5FX01A	Implement and maintain statutory/legal compliance systems	80
MNMF5FX12A	Design system for stable mining	80
MNMF5FX13A	Implement mine transport systems and production equipment	60
MNMF5FX14A	Implement mine services system	60
MNMF5FX15A	Implement mine fixed plant and infrastructure systems	80
MNMF5FX16A	Implement emergency preparedness and response systems	80
MNMF5FX27A	Facilitate the risk management process	80
BSXFMI307A	Manage quality customer service	40
BSXFMI309A	Implement and monitor continuous improvement systems and processes	40

Elective Units		
MNMF5FX04A	Select and commission surface mining plant and equipment	80
MNMF5FX05A	Plan, conduct and oversee drilling operations	60
MNMF5FX06A	Manage blasting operations	60
MNMF5FX07A	Plan and monitor water management	80
MNMF5FX08A	Plan and monitor recycled materials operation	40
MNMF5FX09A	Design stockpile formations and recycling systems	40
MNMF5FX10A	Develop, implement and maintain process control systems	60
Other elective units that may be considered		
MNMF5FX02A	Implement and maintain pit development system	80
MNMF5FX03A	Implement and maintain surface mining operations	80
MNMF5FX11A	Implement ventilation management system	80
BSZ403A	Review assessment	5
BSZ502A	Design and establish the training system	40
BSZ503A	Design and establish the assessment system	40
BSZ504A	Manage training and assessment system	40
BSZ505A	Evaluate the training and assessment system	45
BSZ506A	Develop assessment procedures	25
BSXFMI301A	Manage personal work priorities and professional development	40
BSXFMI302A	Provide leadership in the workplace	40
BSXFMI303A	Establish and manage effective workplace relationships	40
BSXFMI304A	Participate in, lead and facilitate work team	40
BSXFMI305A	Manage operations to achieve planned outcomes	40
BSXFMI306A	Manage workplace information	40
BSXFMI308A	Develop and maintain a safe workplace and environment	40
BSXFMI310A	Facilitate and capitalise in change and innovation	40
BSXFMI311A	Contribute to the development of workplace learning	15
BSAORG302B	Organise schedule on behalf of others to achieve team/section goals	20
TOTAL		1120

Training Program 11: Diploma of Metalliferous Mining (Processing) MNM50399V2

Qualification Title	Diploma of Metalliferous Mining Operations (Processing)	
Qualification Code	MNM50399V2	
Qualification Summary	This qualification reflects the role of personnel working in a mining operation, on a single or a group of sites, 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 develop site specific work instructions and practices to ensure the implementation of the site management systems, plans and policies. They demonstrate the application of a broad range of technical, managerial, coordination and planning skills.	
Qualification Packaging Rules	Successful completion of a total of twenty one (21) units of competency with: <ul style="list-style-type: none"> • Ten (10) core units being mandatory • Six (6) elective units as listed and • Five (5) elective units of competency drawn from Metalliferous Mining Training Package or from other endorsed Training Packages appropriate for use in metalliferous mining mine management at AQF 5. 	
Unit Code	Unit Title	Nominal Hours
Core Units		
MNMCCCOO001A	Communicate in the workplace	20
MNMCCCOO1002A	Work safely	20
MNMCCCOO003A	Plan and organise individual work	20
MNMCCCOO004A	Contribute to quality work outcomes	20
MNMCCCOO005A	Apply local risk control processes	20
MNMF5FX01A	Implement and maintain statutory/legal compliance systems	80
MNMF5FX16A	Implement emergency preparedness and response systems	80
MNMF5FX27A	Facilitate the risk management process	80
BSXFMI307A	Manage quality customer service	40
BSXFMI309A	Implement and monitor continuous improvement systems and processes	40
Elective Units		
MNMF5FX07A	Plan and monitor water management	80
MNMF5FX08A	Plan and monitor recycled materials operation	40
MNMF5FX10A	Develop, implement and maintain process control systems	60
BSXFMI301A	Manage personal work priorities and professional development	40
BSXFMI302A	Provide leadership in the workplace	40
BSXFMI303A	Establish and manage effective workplace relationships	40
BSXFMI304A	Participate in, lead and facilitate work team	40
BSXFMI305A	Manage operations to achieve planned outcomes	40
BSXFMI306A	Manage workplace information	40
BSXFMI308A	Develop and maintain a safe workplace and environment	40
BSXFMI310A	Facilitate and capitalise in change and innovation	40

Unit Code	Unit Title	Nominal Hours
Other elective units that may be considered		
MNMF5FX02A	Implement and maintain pit development system	80
MNMF5FX03A	Implement and maintain surface mining operations	80
MNMF5FX04A	Select and commission surface mining plant and equipment	80
MNMF5FX05A	Plan, conduct and oversee drilling operations	60
MNMF5FX06A	Manage blasting operations	60
MNMF5FX09A	Design stockpile formations and recycling systems	40
MNMF5FX11A	Implement ventilation management system	80
MNMF5FX12A	Design system for stable mining	80
MNMF5FX13A	Implement mine transport systems and production equipment	60
MNMF5FX14A	Implement mine services system	60
BSZ403A	Review assessment	5
BSZ502A	Design and establish the training system	40
BSZ503A	Design and establish the assessment system	40
BSZ504A	Manage training and assessment system	40
BSZ505A	Evaluate the training and assessment system	45
BSZ506A	Develop assessment procedures	25
BSXFM1311A	Contribute to the development of workplace learning	15
BSAORG302B	Organise schedule on behalf of others to achieve team/section goals	20
TOTAL		920

Training Program 12: Advanced Diploma of Metalliferous Mining MNM60101

Qualification Title	Advanced Diploma of Metalliferous Mining	
Qualification Code	MNM60101	
Qualification Summary	<p>This qualification reflects the role of personnel working in a mining operation, on a single or a group of sites, 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 develop site specific work instructions and practices to ensure the implementation of the site management systems, plans and policies. They demonstrate the application of a broad range of technical, managerial, coordination and planning skills.</p>	
Qualification Packaging Rules	<p>A total of fourteen (14) units of competency:</p> <ul style="list-style-type: none"> • nine (9) mandatory units of competency: <ul style="list-style-type: none"> - six (6) Technical Management units as listed - three (3) General Management units as listed • for Surface only <ul style="list-style-type: none"> - Two (2) Technical Management Units as listed, and - Three (3) relevant to the job function from the Metalliferous Mining Training Package or other endorsed Training Packages • for Underground only <ul style="list-style-type: none"> - Three (3) Technical Management Units as listed, and - Two (2) Underground relevant to the job function from the Metalliferous Mining Training Package or other endorsed Training Packages 	
Unit Code	Unit Title	Nominal Hours
Core Units		
MNIC01A	Establish the mine statutory/legal compliance system	100
MNIC02A	Establish the mine risk assessment and control system	80
MNIC03A	Establish mine infrastructure and plant systems	80
MNIC04A	Establish mine services systems	80
MNIC09A	Establish and manage the mine occupational health and safety system	60
MNIC10A	Establish the mine emergency systems	80
MNIL02A	Establish and manage environmental management policies, plans and procedures	60
MNIL06A	Provide leadership	40
MNIL09A	Manage major incidents and emergencies	80
Elective Units		
Surface units		
MNIS01A	Establish ground control and slope stability systems	80
MNIS02A	Establish surface product haulage and transport systems	80
MNIC05A	Establish plant, equipment and infrastructure maintenance systems	60
MNIC06A	Establish the mine water management system	60
MNIC07A	Establish the stockpile management systems	60
TOTAL		1000