Australian Government

RII09 Resources and Infrastructure Industry Training Package

Release: 3.2

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CONTENTS

Modification History

The version details of this endorsed Training Package are in the table below. The latest information is at the top of the table.

Version	Release date	Comments
3.2	25 May 2013	Technical issue with imported units not transferred into each qualification in version 3.1 where corrected.
		ISC updates – no code changes
		RII40412 Certificate IV in Underground Coal Operations. Missing elective RIIMCU501A Implement the spontaneous combustion management plan
		RII40212 Certificate IV in Surface Coal Mining (Open Cut Examiner). Flexibility Policy correction with 1 too many imports identified making achieving packaging rule unattainable
		Imported Units
		Update of High Risk Work Licence units
		Update of PUAFIR and PUASAR units
		Removal of orphan units not identified as elective, prerequisite or corequisite in the Training Package
3.1	15 February 2013	**ISC updates – no code changes**
		RIINHB211A Assist mud rotary drilling
		Imported Units
		30 units replaced with current equivalent units of competency
		UEGNSG202A Construct and lay distribution pipelines to UEGNSG202B Construct and lay distribution pipelines
		FPPSTM4A Troubleshoot and rectify boiler plant systems to FPPSTM440A Troubleshoot and rectify boiler plant systems
		UEPOPS316A Operate and monitor boiler steam/water to UEPOPS316B Operate and monitor boiler steam/water
		MSAPMPER200B Work in accordance with an issued permit to MSAPMPER200C Work in accordance with an issued permit
		PMLOHS301B Work safely with instruments that emit ionising radiation to MSL943001A Work safely with instruments that emit ionizing radiation.
		BSBWOR203A Work effectively with others to BSBWOR203B Work effectively with others
		BSBWOR502A Ensure team effectiveness to BSBWOR502B Ensure

		team effectiveness
		BSBSMB405A Monitor and manage small business operations to BSBSMB405B Monitor and manage small business operations
		BSBWOR501A Manage personal work priorities and professional development to BSBWOR501B Manage professional work priorities and professional development
		PMLORG301A Plan and conduct laboratory/field work to MSL913002A Plan and conduct laboratory/field work
		BSBRKG403B Set up a business or records system for a small business to BSBRKG403C Set up a business or records system for a small business
		FPICOT2221B Trim and cut felled trees to FPICOT2239A Trim and cut felled trees
		ICAU3126B Use advanced features of computer applications to ICAICT308A Use advanced features of computer applications
		BSBCUS301A Deliver and monitor a service to customers to BSBCUS301B Deliver and monitor a service to customers
		BSBCUS401A Coordinate implementation of customer service strategies to BSBCUS401B Coordinate implementation of customer service strategies
		TAAASS401C Plan and organise assessment to TAEASS401A Plan and organise assessment
		TLID1107C Conduct specialised forklift operations to TLID3011A Conduct specialised forklift operations
		HLTFA301B Apply first aid to HLTFA301C Apply first aid
		HLTFA402B Apply advanced first aid to HLTFA402C Apply advanced first aid
		FPIFGM3204A Fall trees manually (intermediate) to FPIFGM3212 Fall trees manually (intermediate)
		FPICOT2221B Trim and cross cut felled trees to FPICOT2239A Trim and cut felled trees
		FPPSTM2A Monitor and control boiler operations to FPPSTM210A Monitor and control boiler operation
		FPPSTM4A Troubleshoot ad rectify boiler plant systems to FPPSTM440A Troubleshoot and rectify boiler plant systems
		UEPOPS242A Operate and monitor dust collection plant to UEPOPS242B Operate and monitor dust collection plant
		MSAPMPER300B Issue work permits to MSAPMPER300C Issue work permits
		UEPOPS316A Operate and monitor boiler steam/water cycle to

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		UEPOPS316B Operate and monitor boiler steam/water cycle
		PUAFIR307A Monitor hazardous atmospheres to PUAFIR307B Monitor hazardous atmospheres
		PMLTEST403A Assist with geotechnical site investigations to PMLTEST403B Assist with geotechnical site investigations
		Imported Units that are prerequisites to existing units
		PUAFIR201B Prevent injury
		PUASAR022A Participate in a rescue operation
		PUASAR022A Participate in a rescue operation
		PUASAR022A Participate in a rescue operation
		PUAFIR308B Employ Personal Protection at a Hazardous Materials Incident
3.0	TBA	**Units of competency**
		New
		RIIBHD305 Conduct down-hole hammer drilling
		RIICRC311 Conduct concrete road paver operations
		RIICRC312 Setup and maintain concrete paver stringlines
		RIICRC313 Conduct concrete road curing and texturing operations
		RIICRC314 Handle concrete materials
		RIICRC315 Use concreting materials and equipment
		RIICRC316 Place and compact concrete
		RIICRC317 Finish concrete pavements
		RIICRC318 Cure concrete
		RIICRC319 Saw and cut concrete pavements to initiate planned cracks
		RIICRC320 Seal concrete pavements
		RIICRC321 Use automated paving guidance systems
		RIICRC322 Receive, check and record concrete deliveries
		RIICRC323 Insert tie bars in fresh concrete
		RIIDES301 Inspect, test and maintain diesel engine systems and their ancillary systems
		RIIDES302 Inspect, test and maintain joints on diesel engine systems
		RIIDES303 Inspect, test and maintain cooling systems on diesel engine systems
		RIIDES304 Inspect, test and maintain inlet systems on diesel engine systems

		RIIDES305 Inspect, test and maintain exhaust systems on diesel engine systems
		RIIDES306 Inspect, test and maintain safety shutdown systems on diesel engine systems
		RIIDES307 Test, determine the cause and rectify excessive emission levels on diesel engine systems
		RIIMPO333 Conduct underground load, haul and dump truck operations
		RIIPEO302 Operate and monitor ore car dumpers
		RIIUND310 Apply shot-crete underground
		ISC Updates with code changes
		RIIBHD304A to RIIBHD304B Set up and prepare for open cut drilling operations
		RIIBLA203A to RIIBLA203B Conduct mobile mixing of explosives
		RIICBS401A to RIICBS401B Apply the principles of asphalt paving and compaction
		RIICBS402A to RIICBS402B Apply the principles for the application of bituminous sprayed treatment
		RIICBS403A to RIICBS403B Apply the principles for the polymer modified binder
		RIICBS404A to RIICBS404B Apply principles for the selection and use of bituminous emulsion
		RIICRC406A to RIICRC406B Apply the principles of pavement maintenance
		RIICWD524A to RIICWD524B Prepare design of sprayed seal surfacing
		RIICWD525A to RIICWD525B Select pavement surfacing
		RIICWM401A to RIICWM401B Supervise civil works
		RIIEGS305A to RIIEGS305B Navigate in remote or trackless area
		RIIERR203A to RIIERR203B Escape from hazardous situation unaided
		RIIMPO205A to RIIMPO205B Operate roller / compactor
		RIIMPO206A to RIIMPO206B Conduct bulk water truck operations
		RIIMPO301B to RIIMPO301C Conduct hydraulic excavator operations
		RIIMPO307A to RIIMPO307B Conduct wheeled grader operations in underground mines
		RIIMPO310A to RIIMPO310B Conduct grader operations

RIINHB210A to RIINHB210B Assist surface directional drilling

RIINHB324A to RIINHB324B Carry out grouting or cementing operations

RIIPRO301B to RIIPRO301C Conduct crushing and screening operations

RIIRIS301A to RIIRIS301B Apply risk management processes

RIISAM203A to RIISAM203B Use hand and power tools

RIISAM204A to RIISAM204B Operate small plant and equipment

RIIVEH203A to RIIVEH203B Operate light vehicle underground

RIIVEH304A to RIIVEH304B Conduct tip truck operations

RIIWBP203A to RIIWBP203B Monitor tailings dam environment

ISC Updates – no code changes

RIIHAN201A Operate a forklift

RIIHAN208A Perform dogging

RIIHAN209A Perform basic rigging

RIIHAN210A Perform intermediate rigging operations

RIIHAN211A Conduct basic scaffolding operations

RIIHAN212A Conduct non-slewing crane operations

RIIHAN213A Work effectively in the drilling industry

RIIHAN301B Operate elevating work platform

RIIHAN302A Conduct intermediate scaffolding

RIIHAN304A Conduct slewing crane operations

RIIHAN305A Operate a gantry or overhead crane

RIIHAN307A Operate a vehicle loading crane

Removed

RIISAM206A Operate equipment services vehicle underground

Imported units

33 superseded units replaced with current equivalent unit of competency

BSBWOR404A Develop work priorities replaced with BSBWOR404B Develop work priorities

FPICOT2221A Trim and cross cut felled trees replaced with FPICOT2221B Trim and cross cut felled trees

FPPSTM1A Manage steam boiler start-up replaced with FPPSTM320A Manage steam boiler startup

		FPPSTM3A Shut down and store steam boiler replaced with FPPSTM330A Shut down and bank steam boiler
		MSAPMPER300B Issue work permits replaced with MSAPMPER300C Issue work permits
		PUASAR002B Undertake road accident rescue replaced with PUASAR024A Undertake road crash rescue
		PUASAR004B Undertake vertical rescue replaced with PUASAR032A Undertake vertical rescue
		PUASAR005B Undertake confined space rescue replaced with PUASAR025A Undertake confined space rescue
		PUASAR008B Search as a member of a land search team replaced with PUASAR027A Undertake land search rescue
		PMLDATA400A Process and interpret data replaced with MSL924001A Process and interpret data
		PMLDATA500B Analyse data and report results replaced with MSL925001A Analyse data and report results
		PMLORG600B Supervise laboratory operations in work/functional area replaced with MSL916003A Supervise laboratory operations in work/functional area
		PMLTEST303B Prepare working solutions replaced with MSL973002A Prepare working solutions
		PMLTEST402B Prepare standardise and use solutions replaced with MSL974001A Prepare standardise and use solutions
		PMLTEST404A Perform chemical tests and procedures replaced with MSL974003A Perform chemical tests and procedures
		PMLTEST406A Perform physical tests replaced with MSL974005A Perform physical tests
		PMLTEST411A Perform mechanical tests replaced with MSL974010A Perform mechanical tests
		PMLSAMP302A Receive and prepare samples for testing replaced with MSL953001A Receive and prepare samples for testing
		PMLTEST300B Perform basic tests replaced with MSL953001A Receive and prepare samples for testing
		PMLTEST307B Prepare trial batches for evaluation replaced with MSL973006A Prepare trial batches for evaluation
		PMLTEST511B Supervise earthworks inspection, sampling and testing operations replaced with MSL975007A Supervise sampling, inspections and testing at construction sites
		PMLTEST520A Perform complex tests to measure engineering properties of materials replaced with MSL975016A Perform complex

		tests to measure engineering properties of materials
		RTD2022A Carry out natural area restoration works replaced with AHCNAR201A Carry out natural area restoration works
		RTD2202A Conduct erosion and sediment control activities replaced with AHCSAW201A Conduct erosion and sediment control activities
		RTD3034A Implement revegetation works replaced with AHCNAR303A Implement revegetation works
		RTD3205A Construct conservation earthworks replaced with AHCSAW301A Construct conservation earthworks
		TAAASS301B Contribute to assessment replaced with TAEASS301B Contribute to assessment
		TAAASS402C Assess competence replaced with TAEASS402B Assess competence
		TAAASS404B Participate in assessment validation replaced with TAEASS403B Participate in assessment validation
		TAADEL301C Provide training through instruction and demonstration of work skills replaced with TAEDEL301A Provide work skill instruction
		TLIA907E Complete and check import/export documentation replaced with TLIA2009A Complete and check import/export documentation
		TLIC407D Drive heavy rigid vehicle replaced with TLIC3004A Drive heavy rigid vehicle
		TLID2207C Conduct weighbridge operations replaced with TLID2022A Conduct weighbridge operations
		Qualifications
		Endorsement required changes
		RII20712 Certificate II in Civil Construction
		RII30112 Certificate III in Surface Extraction Operations
		RII30212 Certificate III in Underground Coal Operations
		RII30912 Certificate III in Civil Construction
		RII40212 Certificate IV in Surface Coal Mining (Open Cut Examiner)
		RII40412 Certificate IV in Coal Underground Operations
		RII40712 Certificate IV in Civil Construction Supervision
		RII50912 Diploma of Underground Coal Mining Management
		RII60312 Advanced Diploma of Underground Coal Mining Management
		Qualifications removed
		• RII31009 Certificate III in Bituminous Surfacing

- RII31109 Certificate III in Bridge Construction and Maintenance
- RII31309 Certificate III in Pipe Laying
- RII31409 Certificate III in Road Construction and Maintenance
- RII31509 Certificate III in Road Marking
- RII31709 Certificate III in Tunnel Construction
- RII32109 Certificate III in Timber Bridge Construction and Maintenance

ISC Updates

All qualifications – Title for Mandatory Units changed to Core Units, Elective titles changed from Specialist Electives and General Electives to Group (#) Electives in accordance with Flexibility in Packaging Rules requirements.

Non-regulated occupations: Amendment to packaging rules to allow for units of competency from accredited courses to be imported

- RII10109 Certificate I in Resources and Infrastructure Operations
- RII20109 Certificate II in Resources and Infrastructure Work Preparation
- RII20609 Certificate II in Mining Field/Exploration Operations
- RII20712 Certificate II in Civil Construction
- RII20809 Certificate II in Bituminous Surfacing
- RII30912 Certificate III in Civil Construction
- RII31609 Certificate III in Trenchless Technology
- RII40609 Certificate IV in Civil Construction Operations
- RII40712 Certificate IV in Civil Construction Supervision
- RII40809 Certificate IV in Civil Construction Design
- RII50309 Diploma of Minerals Processing
- RII50409 Diploma of Civil Construction Management
- RII50509 Diploma of Civil Construction Design
- RII60509 Advanced Diploma of Civil Construction Design
- RII60609 Advanced Diploma of Civil Construction

Other qualification ISC updates

RII10109 Certificate I in Resources and Infrastructure Operations

RII30311 Certificate III in Underground Metalliferous Mining

RII30411 Certificate III in Resource Processing

RII31609 Certificate III in Trenchless Technology

RII31809 Certificate III in Drilling Operations

RII40311 Certificate IV in Metalliferous Mining Operations

		(Underground)
		RII40909 Certificate IV in Drilling Operations
		RII50409 Diploma of Civil Construction Management
		New skills sets
		Skill Set Explosion Protected Diesel Engine Systems Maintenance
		Skill Set Work Zone Traffic Control – Road Labourer
		Skill Set Work Zone Traffic Control – Traffic Controller
		Skill Set Work Zone Traffic Control – Implement Traffic Control Guidance Plan
		Skill Set Work Zone Traffic Control – Supervisor
		Skill Set Work Zone Traffic Control Guidance Plan – Developer
		Skill Set Work Zone Traffic Control – Auditor / Inspector
		Skill Set Surface Coal Mine Safety
		Skill Set Underground Coal Mine Safety
2.0	29/06/11	RIIHAN303A Conduct integrated tool carrier operations replaced with new unit RIIHAN311A Conduct operations with integrated tool carrier
		RIIMCP201A Monitor coal preparation plant operations replaced with new RIIMCP301A Monitor operations in coal preparation plant
		RIINHB204A Assist air drilling replaced with new unit RIINHB219A Assist with air drilling
		RIINHB321A Construct single aquifer production bores replaced with new unit RIINHB325A Construct and complete single aquifer bores
		RIIPBP201A Control acid plant operations replaced with new unit RIIPBP302A Control operations in acid plant
		RIIWMG204A Reclaim and treat water system replaced with new unit RIIWMG302A Reclaim and treat water
		RII30109 Certificate III in Surface Extraction Operations replaced with RII30111 Certificate III in Surface Extraction Operations
		RII30309 Certificate III in Underground Metalliferous Mining replaced with RII30311 Certificate III in Underground Metalliferous Mining
		RII30409 Certificate III in Resource Processing replaced with RII30411 Certificate III in Resource Processing
		RII30609 Certificate III in Small Mining Operations replaced with RII30609 Certificate III in Small Mining Operations
		RII40309 Certificate IV in Metalliferous Mining Operations (Underground) replaced with RII40311 Certificate IV in Metalliferous

		Mining Operations
		RII40409 Certificate IV in Underground Coal Operations replaced with RII40411 Certificate IV in Underground Coal Operations
		New Skill Set
		Skill Set Supervision of Indigenous Employees
		Other New Units of Competency
		RIICOM302A Communicate workplace information
		RIIENV302A Apply environmentally sustainable work practices
		RIIFIA401A Manage financial records
		RIILAT401A Provide leadership in the supervision of Indigenous employees
		RIIMPO331A Conduct operations with stockpile dozer
		RIIMPO332A Conduct operations with skid steer loader
		RIIVEH307A Operate heavy rigid vehicle
		Additional imported units:
		NWP331B Inspect conduit and report on condition and features (for operators)
		NWP440A Supervise conduit inspection and reporting (for supervisors and managers)
		ISC Upgrades – Updated Units of Competency – codes changed to Version B
		RIIBEF201B Plan and organise work
		RIIBLA202B Support underground shotfiring operations
		RIICOM301B Communicate information
		RIIEGS202B Conduct field work
		RIIERR401B Apply and monitor surface operations emergency preparedness and response procedures
		RIIGOV401B Apply, monitor and report on compliance systems
		RIIHAN301B Operate elevating work platform
		RIIMEX203B Break oversize rock
		RIIMEX302B Assess ground conditions
		RIIMEX404B Apply and monitor systems for stable mining
		RIIMPO301B Conduct hydraulic excavator operations
		RIIMPO302B Conduct hydraulic shovel operations
		RIIMPO304B Conduct wheel loader operations

		RIIMPO305B Conduct coal stockpile dozer operations
		RIIMPO308B Conduct tracked dozer operations
		RIIMPO318B Conduct civil construction skid steer loader operations
		RIIMPO313B Conduct face loader operations
		RIIMPO321B Conduct civil construction wheeled front end loader operations
		RIINHB201B Load, secure and unload drilling equipment and materials
		RIINHB208B Assist diamond core drilling
		RIINHB304B Conduct air drilling
		RIINHB307B Conduct conventional core drilling
		RIINHB412B Construct geothermal wells
		RIIPBE205B Conduct roasting operations
		RIIPBE303B Conduct filtering process
		RIIPBE304B Conduct heavy media separation
		RIIPBE308B Conduct thickening and clarifying process
		RIIPBE309B Conduct wet gravity separation
		RIIPBE310B Conduct flotation process
		RIIPBE311B Conduct magnetic separation
		RIIPEO201B Conduct conveyor operations
		RIIPEO203B Conduct stacker operations
		RIIPRO301B Conduct crushing and screening plant operations
		RIIRAI501BImplement mine transport and production equipment
		RIIRAI503B Implement site services and infrastructure systems
		RIIRIS201B Conduct local risk control
		RIISAM211B Remove, repair and refit tyres and tubes
		RIISAM502B Manage general drilling equipment maintenance
		RIISRM301B Blend stockpile materials
		RIISRM302B Conduct stockpile reclaiming operations
		RIISRM303B Move and position materials to form stockpiles
		RIISRM304B Maintain stockpiles
		RIIUND401B Apply and monitor the ventilation management plan
		RIIVEH201B Operate light vehicle

1	7 July 2009	Primary Release

Modification Table

The table below provides details of changes to units of competency and qualifications to assist stakeholders in the transition from RII09 Resources and Infrastructure Operations Version 2.0 to RII09 Resources and Infrastructure Operations Version 3.0.

New Version Number	Affected Qualifications	Affected Units of Competency	Version Modification History
3.0	Skill Set Leading Hand RII40109 Certificate IV in Surface Extraction Operations RII40212 Certificate IV in Surface Coal Mining Open Cut Examiner RII40311 Certificate IV in Metalliferous Mining Operations Underground RII40412 Certificate IV in Underground Coal Operations RII40509 Certificate IV in Resource Processing RII40712 Certificate IV in Civil Construction Supervision RII40809 Certificate IV in Civil Construction Design	BSBWOR404A Develop work priorities	Unit superseded - replaced by equivalent unit: BSBWOR404B Develop work priorities
	RII20712 Certificate II in Civil Construction	FPICOT2221A Trim and cross cut felled trees	Unit superseded - replaced by equivalent unit: FPICOT2221B Trim and cross

	RII30912 Certificate III in Civil Construction		cut felled trees
	RII31409 Certificate III in Road Construction and Maintenance		
	RII32109 Certificate III in Timber Bridge Construction and Maintenance		
	RII30411 Certificate III in Resource Processing	FPPSTM1A Manage steam boiler start-up	Unit superseded - replaced by equivalent unit: FPPSTM320A Manage steam boiler startup
	RII30411 Certificate III in Resource Processing	FPPSTM3A Shut down and store steam boiler	Unit superseded - replaced by equivalent unit: FPPSTM330A Shut down and bank steam boiler
	RII30112 Certificate III in Surface Extraction Operations	MSAPMPER300B Issue work permits	Unit superseded - replaced by equivalent unit: MSAPMPER300C Issue work permits
	RII30311 Certificate III in Underground Metalliferous Mining		
	RII30411 Certificate III in Resource Processing		
	RII32009 Certificate III in Drilling Oil Gas On shore		
	RII41109 Certificate IV in Drilling Oil Gas On shore		
	RII30709 Certificate III in Mine Emergency Response and	PUASAR002B Undertake road accident rescue	Unit superseded - replaced by equivalent unit: PUASAR024A Undertake road crash rescue

	Rescue		
	RII30709 Certificate III in Mine Emergency Response and Rescue	PUASAR004B Undertake vertical rescue	Unit superseded - replaced by equivalent unit: PUASAR032A Undertake vertical rescue
	RII30709 Certificate III in Mine Emergency Response and Rescue	PUASAR005B Undertake confined space rescue	Unit superseded - replaced by equivalent unit: PUASAR025A Undertake confined space rescue
	RII30709 Certificate III in Mine Emergency Response and Rescue	PUASAR008B Search as a member of a land search team	Unit superseded - replaced by equivalent unit: PUASAR027A Undertake land search rescue
	RII30112 Certificate III in Surface Extraction Operations RII40609 Certificate IV in Civil Construction Operations RII40712 Certificate IV in Civil Construction Supervision RII40809 Certificate IV in Civil Construction Design	PMLDATA400A Process and interpret data	Unit superseded - replaced by equivalent unit: MSL924001A Process and interpret data
	RII40509 Certificate IV in Resource Processing RII50409 Diploma of Civil Construction Management RII50509 Diploma of Civil	PMLDATA500B Analyse data and report results	Unit superseded - replaced by equivalent unit: MSL925001A Analyse data and report results

	Construction Design		
		PMLORG600B Supervise laboratory operations in work/functional area	Unit superseded - replaced by equivalent unit: MSL916003A Supervise laboratory operations in work/functional area
	RII40609 Certificate IV in Civil Construction Operations RII40712 Certificate IV in Civil Construction Supervision	PMLTEST303B Prepare working solutions	Unit superseded - replaced by equivalent unit: MSL973002A Prepare working solutions
	RII40609 Certificate IV in Civil Construction Operations RII40712 Certificate IV in Civil Construction Supervision	PMLTEST402B Prepare standardise and use solutions	Unit superseded - replaced by equivalent unit: MSL974001A Prepare standardise and use solutions
	RII40609 Certificate IV in Civil Construction Operations RII40712 Certificate IV in Civil Construction Supervision RII40809 Certificate IV in Civil Construction Design	PMLTEST404A Perform chemical tests and procedures	Unit superseded - replaced by equivalent unit: MSL974003A Perform chemical tests and procedures
	RII40609 Certificate IV in Civil Construction Operations RII40712 Certificate IV in Civil	PMLTEST406A Perform physical tests	Unit superseded - replaced by equivalent unit: MSL974005A Perform physical tests

	Construction Supervision RII40809 Certificate IV in Civil Construction Design		
	RII40609 Certificate IV in Civil Construction Operations RII40712 Certificate IV in Civil Construction Supervision RII40809 Certificate IV in Civil Construction Design	PMLTEST411A Perform mechanical tests	Unit superseded - replaced by equivalent unit: MSL974010A Perform mechanical tests
	RII40609 Certificate IV in Civil Construction Operations RII40712 Certificate IV in Civil Construction Supervision	PMLSAMP302A Receive and prepare samples for testing	Unit superseded - replaced by equivalent unit: MSL953001A Receive and prepare samples for testing
	RII20509 Certificate II in Resource Processing RII30112 Certificate III in Surface Extraction Operations RII40609 Certificate IV in Civil Construction Operations RII40712 Certificate IV in Civil Construction Supervision	PMLTEST300B Perform basic tests	Unit superseded - replaced by equivalent unit: MSL973001A Perform basic tests
	RII40609 Certificate IV in Civil	PMLTEST307B Prepare trial batches for	Unit superseded - replaced by equivalent unit: MSL973006A

	Construction Operations RII40712 Certificate IV in Civil Construction Supervision	evaluation	Prepare trial batches for evaluation
	RII40712 Certificate IV in Civil Construction Supervision RII40809 Certificate IV in Civil Construction Design RII50409 Diploma of Civil Construction Management RII50509 Diploma of Civil Construction Design	PMLTEST511B Supervise earthworks inspection, sampling and testing operations	Unit superseded - replaced by equivalent unit: MSL975007A Supervise sampling, inspections and testing at construction sites
	RII40712 Certificate IV in Civil Construction Supervision RII40809 Certificate IV in Civil Construction Design RII50409 Diploma of Civil Construction Management RII50509 Diploma of Civil Construction Design	PMLTEST520A Perform complex tests to measure engineering properties of materials	Unit superseded - replaced by equivalent unit: MSL975016A Perform complex tests to measure engineering properties of materials
	RII30112 Certificate III in Surface Extraction Operations	RIIBHD304A Set up and prepare for open cut drilling operations	Unit code changed to RIIBHD304B Correct Performance criteria 2.1 *Prepare rig for moving*
	RII20209 Certificate II in Surface Extraction	RIIBLA203A Conduct mobile mixing of	Unit code changed to RIIBLA203B

	Operations RII20409 Certificate II in Underground Metalliferous Mining	explosives	Remove *towing* from Required Skills
	RII40609 Certificate IV in Civil Construction Operations RII40712 Certificate IV in Civil Construction Supervision RII40809 Certificate IV in Civil Construction Design RII50509 Diploma of Civil Construction Design	RIICBS401A Apply the principles of asphalt paving and compaction	Unit code changed to: RIICBS401B Items deemed not relevant removed from Required skills, Required knowledge and Range statement
	RII31009 Certificate III in Bituminous Surfacing RII40609 Certificate IV in Civil Construction Operations RII40712 Certificate IV in Civil Construction Supervision RII40809 Certificate IV in Civil Construction Design RII50509 Diploma of Civil Construction Design	RIICBS402A Apply the principles for the application of bituminous sprayed treatment	Unit code changed to: RIICBS402B Items deemed not relevant removed from Required skills, Required knowledge and Range statement
	RII40609 Certificate IV in Civil Construction Operations RII40712 Certificate	RIICBS403A Apply the principles for the polymer modified binder	Unit code changed to: RIICBS403B Items deemed not relevant removed from Required skills, Required knowledge and Range

	IV in Civil Construction Supervision RII40809 Certificate IV in Civil Construction Design RII50509 Diploma of Civil Construction Design		statement
	RII40609 Certificate IV in Civil Construction Operations RII40712 Certificate IV in Civil Construction Supervision RII40809 Certificate IV in Civil Construction Design RII50509 Diploma of Civil Construction Design	RIICBS404A Apply principles for the selection and use of bituminous emulsion	Unit code changed to: RIICBS404B Items deemed not relevant removed from Required skills, Required knowledge and Range statement Element 2 wording corrected
	RII40609 Certificate IV in Civil Construction Operations RII40712 Certificate IV in Civil Construction Supervision RII40809 Certificate IV in Civil Construction Design RII50509 Diploma of Civil Construction Design	RIICBS410A Apply the principles for the manufacture of bituminous emulsion	Removed from training package. Not used in civil construction
	RII31409 Certificate III in Road Construction and Maintenance	RIICRC311 Conduct concrete road paver operations	New unit

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	RII31409 Certificate III in Road Construction and Maintenance	RIICRC312 Setup and maintain concrete paver stringlines	New unit
	RII31409 Certificate III in Road Construction and Maintenance	RIICRC313 Conduct concrete road curing and texturing operations	New unit
	RII31409 Certificate III in Road Construction and Maintenance	RIICRC314 Handle concrete materials	New unit
	RII31409 Certificate III in Road Construction and Maintenance	RIICRC315 Use concreting materials and equipment	New unit
	RII31409 Certificate III in Road Construction and Maintenance	RIICRC316 Place and compact concrete	New unit
	RII31409 Certificate III in Road Construction and Maintenance	RIICRC317 Finish concrete pavements	New unit
	RII31409 Certificate III in Road Construction and Maintenance	RIICRC318 Cure concrete	New unit
	RII31409 Certificate III in Road Construction and Maintenance	RIICRC319 Saw and cut concrete pavements to initiate planned cracks	New unit
	RII31409 Certificate III in Road Construction and Maintenance	RIICRC320 Seal concrete pavements	New unit
	RII31409 Certificate III in Road Construction and	RIICRC321 Use automated paving guidance systems	New unit

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	Maintenance		
	RII31409 Certificate III in Road Construction and Maintenance	RIICRC322 Receive, check and record concrete deliveries	New unit
	RII31409 Certificate III in Road Construction and Maintenance	RIICRC323 Insert tie bars in fresh concrete	New unit
	RII40609 Certificate IV in Civil Construction Operations RII40712 Certificate IV in Civil Construction Supervision	RIICRC406A Apply the principles of pavement maintenance	Unit code changed to RIICRC406B Items deemed not relevant removed from Required skills, Required knowledge and Range statement
	RII40809 Certificate IV in Civil Construction Design RII50509 Diploma of Civil Construction Design	RIICWD524A Prepare design of sprayed seal surfacing	Unit code changed to: RIICWD524B Items deemed not relevant removed from Required skills
	RII40609 Certificate IV in Civil Construction Operations RII40712 Certificate IV in Civil Construction Supervision RII40809 Certificate IV in Civil Construction Design RII50509 Diploma of Civil Construction Design	RIICWD525A Select pavement surfacing	Unit code changed to: RIICWD525B Items deemed not relevant removed from Required skills
	RII40712 Certificate IV in Civil Construction	RIICWM401A Supervise civil works	Unit code changed to RIICWM401B Addition to range statement under

	Supervision		Civil Works: *installation of underground services*
	Skill Set Explosion Protected Diesel Engine Systems Maintenance	RIIDES301 Inspect, test and maintain diesel engine systems and their ancillary systems	New unit
	Skill Set Explosion Protected Diesel Engine Systems Maintenance	RIIDES302 Inspect, test and maintain joints on diesel engine systems	New unit
	Skill Set Explosion Protected Diesel Engine Systems Maintenance	RIIDES303 Inspect, test and maintain cooling systems on diesel engine systems	New unit
	Skill Set Explosion Protected Diesel Engine Systems Maintenance	RIIDES304 Inspect, test and maintain inlet systems on diesel engine systems	New unit
	Skill Set Explosion Protected Diesel Engine Systems Maintenance	RIIDES305 Inspect, test and maintain exhaust systems on diesel engine systems	New unit
	Skill Set Explosion Protected Diesel Engine Systems Maintenance	RIIDES306 Inspect, test and maintain safety shutdown systems on diesel engine systems	New unit
	Skill Set Explosion Protected Diesel Engine Systems Maintenance	RIIDES307 Test, determine the cause and rectify excessive emission levels on diesel engine systems	New unit
	RII20609 Certificate II in Mining Field Exploration Operations RII30509 Certificate III in Mining Exploration	RIIEGS305A Navigate in remote or trackless area	Unit code changed to RIIEGS305B Addition to *Maps* and *Sources* in Range Statement

	RII20309 Certificate II In Underground Coal Mining RII20409 Certificate II in Underground Metalliferous Mining RII30212 Certificate III in Underground Coal Operations RII30311 Certificate III in Underground Metalliferous Mining	RIIERR203A Escape from hazardous situation unaided	Unit code changed to RIIERR203B Edit Performance criteria 1.3, 2.1 and 2.4 Change Method of Assessment to state:• *first hand testimonial evidence of the candidate's:* ◦ *working with undertaking and completing escape from hazardous situation unaided*
	RII20209 Certificate II in Surface Extraction Operations RII20309 Certificate II In Underground Coal Mining RII20409 Certificate II in Underground Metalliferous Mining RII20509 Certificate II in Resource Processing RII20909 Certificate II Drilling Operations RII21109 Certificate II in Drilling Oil Gas On shore RII30912 Certificate III in Civil Construction RII31409 Certificate III in Road Construction and Maintenance RII31509 Certificate	RIIHAN201A Operate a forklift	Unit descriptor: Reference to National Occupational Health and Safety Certification Standards replaced by National Standard for High Risk Work

	III in Road Marking		
	RII20109 Certificate II in Resources and Infrastructure Work Preparation RII20209 Certificate II in Surface Extraction Operations RII20309 Certificate II In Underground Coal Mining RII20409 Certificate II in Underground Metalliferous Mining RII20509 Certificate II in Resource Processing RII20909 Certificate II Drilling Operations RII21109 Certificate II in Drilling Oil Gas On shore RII30112 Certificate III in Surface Extraction Operations RII30611 Certificate III in Small Mining Operations RII30809 Certificate III in Civil Construction Plant	RIIHAN208A Perform dogging	Unit descriptor: Reference to National Occupational Health and Safety Certification Standards replaced by National Standard for High Risk Work

	Operations		
	RII30912 Certificate III in Civil Construction		
	RII31009 Certificate III in Bituminous Surfacing		
	RII31109 Certificate III in Bridge Construction and Maintenance		
	RII31209 Certificate III in Civil Foundations		
	RII31309 Certificate III in Pipe Laying		
	RII31409 Certificate III in Road Construction and Maintenance		
	RII31509 Certificate III in Road Marking		
	RII31609 Certificate III in Trenchless Technology		
	RII31709 Certificate III in Tunnel Construction		
	RII32109 Certificate III in Timber Bridge Construction and Maintenance		
		RIIHAN209A Perform basic rigging	Unit descriptor: Reference to National Occupational Health and Safety Certification Standards replaced by National Standard for High Risk Work
	RII20209 Certificate II in Surface Extraction Operations	RIIHAN210A Perform intermediate rigging operations	Unit descriptor: Reference to National Occupational Health and Safety Certification Standards replaced by National Standard for

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	RII20309 Certificate II In Underground Coal Mining		High Risk Work
	RII20409 Certificate II in Underground Metalliferous Mining		
	RII20509 Certificate II in Resource Processing		
	RII20109 Certificate II in Resources and Infrastructure Work Preparation	RIIHAN211A Conduct basic scaffolding operations	Unit descriptor: Reference to National Occupational Health and Safety Certification Standards replaced by National Standard for High Risk Work
	RII20209 Certificate II in Surface Extraction Operations		
	RII20309 Certificate II In Underground Coal Mining		
	RII20712 Certificate II in Civil Construction		
	RII30809 Certificate III in Civil Construction Plant Operations		
	RII30912 Certificate III in Civil Construction		
	RII31109 Certificate III in Bridge Construction and Maintenance		
	RII31209 Certificate III in Civil Foundations		
	RII31309 Certificate III in Pipe Laying		
	RII31409 Certificate III in Road		

	Construction and Maintenance RII31609 Certificate III in Trenchless Technology RII31709 Certificate III in Tunnel Construction RII32109 Certificate III in Timber Bridge Construction and Maintenance		
	RII20209 Certificate II in Surface Extraction Operations RII20309 Certificate II In Underground Coal Mining RII20409 Certificate II in Underground Metalliferous Mining RII20509 Certificate II in Resource Processing	RIIHAN212A Conduct non-slewing crane operations	Unit descriptor: Reference to National Occupational Health and Safety Certification Standards replaced by National Standard for High Risk Work
	RII20909 Certificate II Drilling Operations	RIIHAN213A Work effectively in the drilling industry	Unit descriptor: Reference to National Occupational Health and Safety Certification Standards replaced by National Standard for High Risk Work

	RII20712 Certificate II in Civil Construction RII30112 Certificate III in Surface Extraction Operations RII30912 Certificate III in Civil Construction RII31109 Certificate III in Bridge Construction and Maintenance RII31209 Certificate III in Civil Foundations RII31309 Certificate III in Pipe Laying RII31409 Certificate III in Road Construction and Maintenance RII31509 Certificate III in Road Marking RII31609 Certificate III in Trenchless Technology RII31709 Certificate III in Tunnel Construction	RIIHAN301B Operate elevating work platform	Unit descriptor: Reference to National Occupational Health and Safety Certification Standards replaced by National Standard for High Risk Work
	RII20309 Certificate II In Underground Coal Mining RII30112 Certificate III in Surface Extraction Operations RII31109 Certificate III in Bridge Construction and	RIIHAN302A Conduct intermediate scaffolding	Unit descriptor: Reference to National Occupational Health and Safety Certification Standards replaced by National Standard for High Risk Work

	Maintenance RII32109 Certificate III in Timber Bridge Construction and Maintenance		
	RII30112 Certificate III in Surface Extraction Operations RII30212 Certificate III in Underground Coal Operations RII30311 Certificate III in Underground Metalliferous Mining	RIIHAN304A Conduct slewing crane operations	Unit descriptor: Reference to National Occupational Health and Safety Certification Standards replaced by National Standard for High Risk Work
	RII20309 Certificate II In Underground Coal Mining RII20409 Certificate II in Underground Metalliferous Mining RII30112 Certificate III in Surface Extraction Operations RII30411 Certificate III in Resource Processing	RIIHAN305A Operate a gantry or overhead crane	Unit descriptor: Reference to National Occupational Health and Safety Certification Standards replaced by National Standard for High Risk Work
	RII20309 Certificate II In Underground Coal Mining RII20909 Certificate II Drilling Operations RII21109 Certificate II in Drilling Oil Gas On shore RII30112 Certificate III in Surface	RIIHAN307A Operate a vehicle loading crane	Unit descriptor: Reference to National Occupational Health and Safety Certification Standards replaced by National Standard for High Risk Work

	Extraction Operations RII30411 Certificate III in Resource Processing RII30912 Certificate III in Civil Construction RII31409 Certificate III in Road Construction and Maintenance RII31509 Certificate III in Road Marking RII31609 Certificate III in Trenchless Technology		
	RII20209 Certificate II in Surface Extraction Operations	RIIMPO205A Operate roller / compactor	Unit code changed to RIIMPO205B Add Coal Mining to application Clarify *lifting* in required skills
	RII20209 Certificate II in Surface Extraction Operations RII20509 Certificate II in Resource Processing RII30112 Certificate III in Surface Extraction Operations RII30112 Certificate III in Surface Extraction Operations	RIIMPO206A Conduct bulk water truck operations	Unit code changed to RIIMPO206B Required knowledge correction: haul truck changed to water truck Required skills: remove reference to hand tools
	RII20409 Certificate II in Underground Metalliferous Mining RII30311 Certificate	RIIMPO209A Conduct underground load, haul, dump truck operations	Unit code and title changed to RIIMPO333 Conduct underground load, haul and dump truck operations

	III in Underground Metalliferous Mining		AQF level changed from II to III Remove *hand and power tools* from required knowledge
	RII30112 Certificate III in Surface Extraction Operations RII30611 Certificate III in Small Mining Operations RII40212 Certificate IV in Surface Coal Mining Open Cut Examiner	RIIMPO301B Conduct hydraulic excavator operations	Unit code changed to RIIMPO301C Edit Performance Criteria 2.6 and related Range Statement items
	RII20309 Certificate II In Underground Coal Mining RII30311 Certificate III in Underground Metalliferous Mining	RIIMPO307A Conduct wheeled grader operations in underground mines	Unit code changed to RIIMPO307B Remove *string lines* from Required Knowledge
	RII30112 Certificate III in Surface Extraction Operations RII30411 Certificate III in Resource Processing RII40212 Certificate IV in Surface Coal Mining Open Cut Examiner	RIIMPO310A Conduct grader operations	Unit code changed to RIIMPO310B Remove all references to *towing*
	RII30809 Certificate III in Civil Construction Plant Operations	RIIMPO320A Conduct civil construction excavator operations	Unit code changed to RIIMPO320B Addition of missing text to Performance Criteria 5.2
	RII20909 Certificate II Drilling Operations	RIINHB210A Assist surface directional drilling	Unit code changed to RIINHB210B Required knowledge: remove

	RII31809 Certificate III in Drilling Operations		underground references
	RII31809 Certificate III in Drilling Operations	RIINHB324A Conduct grouting or cementing operations	Unit code and name changed to RIINHB324B Carry out grouting or cementing operations
	RII31809 Certificate III in Drilling Operations	RIIBHD305 Conduct down-hole hammer drilling	New unit
	RII32009 Certificate III in Drilling Oil Gas On shore	RIIOGN301A Prepare and operate drilling fluid systems	Removed from training package. Use RIIOGD203A Prepare and operate drilling fluid systems
	RII30411 Certificate III in Resource Processing	RIIPEO302 Operate and monitor ore car dumpers	New unit
	RII20509 Certificate II in Resource Processing RII30112 Certificate III in Surface Extraction Operations RII30411 Certificate III in Resource Processing	RIIPRO301B Conduct crushing and screening operations	Unit code changed to RIIPRO301C Clarification of Required Skills and Required Knowledge

	Skill Set Leading Hand	RIIRIS301A Apply risk management processes	Unit code changed to RIIRIS301B
	RII30112 Certificate III in Surface Extraction Operations		Change references to *controls* to *treatments* throughout
	RII30212 Certificate III in Underground Coal Operations		Performance criteria edits:
			1.3 now A*ccess, interpret and apply existing procedures to control recognised hazards*
	RII30311 Certificate III in Underground Metalliferous Mining		1.4 now *Identify hazards not controlled by existing procedures*
	RII30411 Certificate III in Resource Processing		2.4 remove *from the appropriate party*
	RII30611 Certificate III in Small Mining Operations		Remove 3.2, 3.3
			Edit 4.3
	RII30709 Certificate III in Mine Emergency Response and Rescue		Edit 5.1
			Rename *Risk Management Systems* in Range Statement to *Existing procedure*s
	RII31809 Certificate III in Drilling Operations		
	RII31909 Certificate III in Drilling Oil Gas Off shore		
	RII40109 Certificate IV in Surface Extraction Operations		
	RII40311 Certificate IV in Metalliferous Mining Operations Underground		
	RII40509 Certificate IV in Resource Processing		

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	RII40609 Certificate IV in Civil Construction Operations RII40712 Certificate IV in Civil Construction Supervision RII41109 Certificate IV in Drilling Oil Gas On shore		
	RII10109 Certificate I in Resources and Infrastructure Operations RII20109 Certificate II in Resources and Infrastructure Work Preparation RII20409 Certificate II in Underground Metalliferous Mining RII20712 Certificate II in Civil Construction RII20809 Certificate II in Bituminous Surfacing RII21009 Certificate II in Drilling Oil Gas Off shore RII30809 Certificate III in Civil Construction Plant Operations RII30912 Certificate III in Civil Construction	RIISAM203A Use hand and power tools	Unit code changed to RIISAM203B Clarification of Hand and power tools in Range Statement Remove performance criteria relating to power sources, add to Required Knowledge

	RII31009 Certificate III in Bituminous Surfacing	
	RII31109 Certificate III in Bridge Construction and Maintenance	
	RII31209 Certificate III in Civil Foundations	
	RII31309 Certificate III in Pipe Laying	
	RII31409 Certificate III in Road Construction and Maintenance	
	RII31509 Certificate III in Road Marking	
	RII31609 Certificate III in Trenchless Technology	
	RII31709 Certificate III in Tunnel Construction	
	RII32109 Certificate III in Timber Bridge Construction and Maintenance	

	RII10109 Certificate I in Resources and Infrastructure Operations	RIISAM204A Operate small plant and equipment	Unit code changed to RIISAM204B
	RII20712 Certificate II in Civil Construction		Clarification of *Small plant and equipment* in Range Statement
	RII20809 Certificate II in Bituminous Surfacing		
	RII30809 Certificate III in Civil Construction Plant Operations		
	RII30912 Certificate III in Civil Construction		
	RII31009 Certificate III in Bituminous Surfacing		
	RII31109 Certificate III in Bridge Construction and Maintenance		
	RII31209 Certificate III in Civil Foundations		
	RII31309 Certificate III in Pipe Laying		
	RII31409 Certificate III in Road Construction and Maintenance		
	RII31509 Certificate III in Road Marking		
	RII31609 Certificate III in Trenchless Technology		
	RII31709 Certificate III in Tunnel Construction		
	RII32009 Certificate		

	III in Drilling Oil Gas On shore		
	RII32109 Certificate III in Timber Bridge Construction and Maintenance		
	RII20409 Certificate II in Underground Metalliferous Mining RII20909 Certificate II Drilling Operations	RIISAM206A Operate equipment services vehicle underground	Removed from training package. Use RIIVEH203A Operate a light vehicle underground
	RII20409 Certificate II in Underground Metalliferous Mining RII30311 Certificate III in Underground Metalliferous Mining	RIIUND203A Apply shot-crete	Unit code and title changed to RIIUND310 Apply shot-crete underground AQF level changed from II to III Edit Performance Criteria 1.5, 2.2 and 3.1 Item removed from Required Skills Add Civil Construction to application
	RII20409 Certificate II in Underground Metalliferous Mining	RIIVEH203A Operate light vehicle underground	Unit code changed to RIIVEH203B Remove *and/or attachments* from Performance Criteria 1.4
	RII30809 Certificate III in Civil	RIIVEH304A Conduct tip truck operations	Unit code changed to RIIVEH304B

	Construction Plant Operations RII30912 Certificate III in Civil Construction		Addition of MC category to Range Statement
	RII20509 Certificate II in Resource Processing RII30411 Certificate III in Resource Processing	RIIWBP203A Monitor tailings dam environment	Unit code changed to RIIWBP203B Required skills edited Control, monitor and water quality added to Range statement
	RII20209 Certificate II in Surface Extraction Operations	RTD2022A Carry out natural area restoration works	Unit superseded - replaced by equivalent unit: AHCNAR201A Carry out natural area restoration works
	RII20209 Certificate II in Surface Extraction Operations RII30611 Certificate III in Small Mining Operations RII30809 Certificate III in Civil Construction Plant Operations	RTD2202A Conduct erosion and sediment control activities	Unit superseded - replaced by equivalent unit: AHCSAW201A Conduct erosion and sediment control activities
	RII20209 Certificate II in Surface Extraction Operations RII30611 Certificate III in Small Mining Operations	RTD3034A Implement revegetation works	Unit superseded - replaced by equivalent unit: AHCNAR303A Implement revegetation works
	RII20209 Certificate II in Surface Extraction Operations RII30611 Certificate III in Small Mining Operations	RTD3205A Construct conservation earthworks	Unit superseded - replaced by equivalent unit: AHCSAW301A Construct conservation earthworks

	RII30809 Certificate III in Civil Construction Plant Operations		
	RII40109 Certificate IV in Surface Extraction Operations RII40311 Certificate IV in Metalliferous Mining Operations Underground RII40509 Certificate IV in Resource Processing	TAAASS301B Contribute to assessment	Unit superseded - replaced by equivalent unit: TAEASS301B Contribute to assessment
	RII40109 Certificate IV in Surface Extraction Operations RII40212 Certificate IV in Surface Coal Mining Open Cut Examiner RII40311 Certificate IV in Metalliferous Mining Operations Underground RII40509 Certificate IV in Resource Processing RII40909 Certificate IV in Drilling Operations RII41109 Certificate IV in Drilling Oil Gas On shore	TAAASS402C Assess competence	Unit superseded - replaced by equivalent unit: TAEASS402B Assess competence
	RII40109 Certificate IV in Surface Extraction Operations RII40311 Certificate IV in Metalliferous	TAAASS404B Participate in assessment validation	Unit superseded - replaced by equivalent unit: TAEASS403B Participate in assessment validation

	Mining Operations Underground RII40509 Certificate IV in Resource Processing RII40909 Certificate IV in Drilling Operations RII41109 Certificate IV in Drilling Oil Gas On shore		
	RII31809 Certificate III in Drilling Operations RII31909 Certificate III in Drilling Oil Gas Off shore RII32009 Certificate III in Drilling Oil Gas On shore RII40109 Certificate IV in Surface Extraction Operations RII40311 Certificate IV in Metalliferous Mining Operations Underground RII40509 Certificate IV in Resource Processing	TAADEL301C Provide training through instruction and demonstration of work skills	Unit superseded - replaced by equivalent unit: TAEDEL301A Provide work skill instruction
	RII30411 Certificate III in Resource Processing	TLIA907E Complete and check import/export documentation	Unit superseded - replaced by equivalent unit: TLIA2009A Complete and check import/export documentation
	RII30112 Certificate III in Surface Extraction Operations	TLIC407D Drive heavy rigid vehicle	Unit superseded - replaced by equivalent unit: TLIC3004A Drive heavy rigid vehicle
	RII20209 Certificate	TLID2207C Conduct	Unit superseded - replaced by

	II in Surface Extraction Operations RII30112 Certificate III in Surface Extraction Operations	weighbridge operations	equivalent unit: TLID2022A Conduct weighbridge operations

Skill Sets and Qualifications		
	Skill Set Explosion Protected Diesel Engine Systems Maintenance	RIIDES301 Inspect, test and maintain diesel engine systems and ancillary systems RIIDES302 Inspect, test and maintain joints on diesel engine systems RIIDES303 Inspect, test and maintain cooling systems on diesel engine systems RIIDES304 Inspect, test and maintain inlet systems on diesel engine systems RIIDES305 Inspect, test and maintain exhaust systems on diesel engine systems RIIDES306 Inspect, test and maintain safety shutdown systems on diesel engine systems RIIDES307 Test, determine the cause and rectify excessive emission levels on diesel engine systems	New Skill Set for regulated activity - maintenance of explosion protected diesel engine systems for vehicles used in underground coal mines.
	Skill Set Work Zone Traffic Control - Road Labourer	RIIOHS201A Work safely and follow OHS policies and work	New Skill Set as advised by AustRoads Report - Implementing National Best Practice for Traffic Control at Roadwork Sites -

		procedures. RIICOM201A Communicate in the workplace.	Training and Accreditation
	Skill Set Work Zone Traffic Control - Traffic Controller	RIIOHS201A Work safely and follow OHS policies and work procedures. RIIOHS205A Control traffic with a stop/slow bat. RIICOM201A Communicate in the workplace.	New Skill Set as advised by AustRoads Report - Implementing National Best Practice for Traffic Control at Roadwork Sites - Training and Accreditation
	Skill Set Work Zone Traffic Control - Implement Traffic Control Guidance Plan	RIIOHS201A Work safely and follow OHS policies and work procedures. RIICOM201A Communicate in the workplace. RIIOHS302A Implement traffic management plan.	New Skill Set as advised by AustRoads Report - Implementing National Best Practice for Traffic Control at Roadwork Sites - Training and Accreditation
	Skill Set Work Zone Traffic Control - Supervisor	RIIOHS201A Work safely and follow OHS policies and work procedures RIIRIS301A Apply risk management processes RIIGOV401A Apply monitor and report on compliance systems RIIOHS302A Implement traffic management plan	New Skill Set as advised by AustRoads Report - Implementing National Best Practice for Traffic Control at Roadwork Sites - Training and Accreditation

		RIIBEF402A Supervise on-site operations	
	Skill Set Work Zone Traffic Control Guidance Plan - Developer	RIIOHS201A Work safely and follow OHS policies and work procedures. RIIRIS301A Apply risk management processes. RIIGOV401A Apply monitor and report on compliance systems. RIICWD503A Prepare work zone traffic management plan.	New Skill Set as advised by AustRoads Report - Implementing National Best Practice for Traffic Control at Roadwork Sites - Training and Accreditation
	Skill Set Work Zone Traffic Control - Auditor / Inspector	RIIOHS201A Work safely and follow OHS policies and work procedures. RIIRIS301A Apply risk management processes. RIIGOV401A Apply monitor and report on compliance systems. RIICWD503A Prepare work zone traffic management plan.	New Skill Set as advised by AustRoads Report - Implementing National Best Practice for Traffic Control at Roadwork Sites - Training and Accreditation

	Skill Set Underground Coal Mine Safety	RIIOHS201A Work safely and follow OHS policies and procedures RIIERR205A Apply initial first aid RIIGOV201A Comply with site work processes/procedures RIIRIS201B Conduct local risk control RIICOM201A Communicate in the workplace RIIERR203B Escape from a hazardous situation unaided	New Skill Set in response to Recognised Standard 11 Training in Coal Mines under the Coal Mining Safety and Health Act 1999 (QLD). This skill set is applicable to underground coal mine workers. Note: title corrected between draft and final
	Skill Set Surface Coal Mine Safety	RIIOHS201A Work safely and follow OHS policies and procedures RIIERR205A Apply initial first aid RIIGOV201A Comply with site work processes/procedures RIIRIS201B Conduct local risk control RIICOM201A Communicate in the workplace RIIERR302A Respond to local emergencies and incidents	New Skill Set in response to Recognised Standard 11 Training in Coal Mines under the Coal Mining Safety and Health Act 1999 (QLD) This skill set is applicable to surface coal mine workers. Note: title corrected between draft and final
	All qualifications		Title for *Mandatory Units* changed to *Core Units* Elective titles changed from *Specialist Electives* and *General Electives* to *Group (#) Electives* in accordance with Flexibility in Packaging Rules requirements.

			Import rule clarified to specify AQF level of units able to be imported
	All qualifications for occupations not regulated: RII10109 Certificate I in Resources and Infrastructure Operations RII20109 Certificate II in Resources and Infrastructure Work Preparation RII20609 Certificate II in Mining Field/Exploration Operations RII20712 Certificate II in Civil Construction RII20809 Certificate II in Bituminous Surfacing RII30909 Certificate III in Civil Construction RII31609 Certificate III in Trenchless Technology RII40609 Certificate IV in Civil Construction Operations RII40709 Certificate IV in Civil Construction Supervision RII40809 Certificate		Amendment to packaging rules to allow for units of competency from accredited courses to be imported: Imported unit text added: *or accredited course* *Units of competency chosen must* *- be relevant to the competency requirements for the job function* *- reflect the competency profile for the occupation at the enterprise level* *- in the case of accredited course units of competency, not duplicate in part or in whole any unit from a Training Package.*

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	IV in Civil Construction Design		
	RII50309 Diploma of Minerals Processing		
	RII50409 Diploma of Civil Construction Management		
	RII50509 Diploma of Civil Construction Design		
	RII60509 Advanced Diploma of Civil Construction Design		
	RII60609 Advanced Diploma of Civil Construction		
	RII10109 Certificate I in Resources and Infrastructure Operations		Packaging rules: allow import of units from other training package at AQF level I.
	RII20712 Certificate II in Civil Construction		Code changed to RII20712 Flexibility in packaging rules policy response: Successful completion of sixteen (16) units of competency made up of: • ten (10) core units (not 13), and • six (6) Group A elective units (not 3) of which: ◦ at least two (3) must come from the electives listed below ◦ up to three (3) units (not 1) may come from Certificate II or Certificate III level from this, or any other Training Package - up to two (2) units may come from an accredited coruse at AQF

			II to III level Core units moved to Group A Electives: RIIWMG203A Drain and dewater civil construction site RIICCM208A Carry out basic levelling RIISAM201A Handle resources and infrastructure materials and safely dispose of non toxic materials
	RII30111 Certificate III in Surface Extraction Operations		Code changed to RII30112 Core units: Remove RIICOM301B Communicate information Group B electives: Add RIICOM301B Communicate information
	RII30209 Certificate III in Underground Coal Operations		Code changed to RII30209 Core units: Replace RIICOM301B Communicate information with RIICOM302A Communicate workplace information Group B electives: Add RIICOM301B Communicate information
	RII30311 Certificate III in Underground Metalliferous Mining		Move RIIERR203B Escape from a hazardous situation unaided from Group B to Group A electives
	RII30411 Certificate III in Resource Processing		Group B Elective: Remove duplicate units RIIPGP201A Conduct pump operations RIIPGP202A Handle reagents

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			Add RIIMPO322A Conduct operations with skid steer loader
	RII30909 Certificate III in Civil Construction		Code changed to RII30912 Flexibility in packaging rules policy response:Eight (8) Certificate III Civil Construction qualifications merged to form one qualification with 8 Specialist streams Stream 1 – Bituminous Surfacing Stream 2 – Bridge Construction and Maintenance Stream 3 – Pipe Laying Stream 4 – Road Construction and Maintenance Stream 5 – Road Marking Stream 6 – Tunnel Construction Stream 7 – Timber Bridge Construction and Maintenance Stream 8 – Civil Construction General Core and Elective units modified in accordance with packaging rules policy Qualifications removed and incorporated in this qualification: RII31009 Certificate III in Bituminous Surfacing RII31109 Certificate III in Bridge Construction and Maintenance RII31309 Certificate III in Pipe Laying RII31409 Certificate III in Road Construction and Maintenance RII31509 Certificate III in Road Marking

			RII31709 Certificate III in Tunnel Construction RII32109 Certificate III in Timber Bridge Construction and Maintenance
	RII31609 Certificate III in Trenchless Technology		Addition to Group A electives RIICTC301A Install tunnelling constructions services RIICTC302A Line tunnel RIICTC303A Excavate tunnel by machine RIICTC304A Muck out tunnel earthworks RIICTC305A Construct portals RIICPL301A Install water mains pipelines RIICPL302A Install storm water systems RIICPL303A Install sewer pipelines RIICPL304A Install pre-cast gully pits

			RIICPL305A Install pre-cast access chambers RIICCM301A Construct and dismantle fences and gates RIIMPO319A Conduct backhoe/loader operations RIIMPO320A Conduct civil construction excavator operations
	RII31809 Certificate III in Drilling Operations		Packaging rules: Remove requirement for assist unit to be completed for each conduct unit undertaken. Group A Electives: Added RIIBHD305 Conduct down-hole drilling Added RIINHB324B Conduct grouting or cementing operations Group B Electives: Added RIIBHD301A Conduct surface blast hole drilling operations and RIIBHD304A Set-up and prepare for open cut drilling operations
	RII40209 Certificate IV in Surface Coal Mining (Open Cut Examiner)		Qualification code change to RII40212 Core units: Increase to ten (10), add BSBSUS301A Implement and monitor environmentally sustainable practices, individuals can select to complete either RIIBLA201A OR RIIBLA301A - remove advisory text regarding differing State requirements in NSW and QLD
	RII40311 Certificate IV in Metalliferous Mining Operations (Underground)		Group A Electives: Remove duplicate unit BSBOHS407A Monitor a safe workplace

	RII40411 Certificate IV in Coal Underground Operations		Qualification code change to RII40412 Core units: Increase to ten (10), add RIIMCU406A Apply and monitor the inrush management plan, individuals can select to complete either RIIBLA202B OR RIIBLA302A - remove advisory text regarding differing State requirements in NSW and QLD Group B electives: Add RIILAT401A Provide leadership in the supervision of Indigenous Australian employees
	RII40709 Certificate IV in Civil Construction Supervision		Qualification code changed to RII40712 Packaging rules to be revised to include up to two units from this or another training package RIICWM401A moved from Core units to Group A Electives and packaging rules updated to state: *must complete either RIICWM401A OR an Apply the principles of unit* Group B Electives: Add NWP440A Supervise conduit inspection and reporting (for supervisors and managers) TAEDEL301A Provide work skill instruction
	RII40909 Certificate IV in Drilling Operations		Group A Electives: Add RIIBEF401A Manage non-routine complex technical situations
	RII50409 Diploma of Civil Construction Management		Packaging rules: clarification of number of packaging rules

	RII50909 Diploma of Underground Coal Mining Management		Qualification code change to RII50912

Core units: Increase to ten (10), add RIIMCU505A Implement the inrush management plan,

individuals can select to complete either RIIBLA202B OR RIIBLA302A - remove advisory text regarding differing State requirements in NSW and QLD |
| | RII60309 Advanced Diploma of Underground Coal Mining Management | | Qualification code change to RII60312

Core units: Increase to ten (10), add RIIMCU406A Apply and monitor the inrush management plan,

individuals can select to complete either RIIBLA202B OR RIIBLA302A - remove advisory text regarding differing State requirements in NSW and QLD |
| 3.1 | RII20712 Cert II Civil Construction

RII30912 Cert III Civil Construction

RII31409 Cert III Road Construction and Maintenance

RII32109 Cert III Timber Bridge Construction Maintenance | FPICOT2221B Trim and cut felled trees | FPICOT2239A Trim and cut felled trees |
	RII30912 Cert III Civil Construction	UEGNSG202A Construct and lay distribution pipelines	UEGNSG202B Construct and lay distribution pipelines
	RII30411 Cert III Resources Processing	FPPSTM4A Troubleshoot and rectify boiler plant systems	FPPSTM440A Troubleshoot and rectify boiler plant systems
	RII30411 Cert III Resource Processing	UEPOPS316A Operate and monitor boiler	UEPOPS316B Operate and monitor boiler steam/water

		steam/water	
	RII21109 Cert II Drilling Oil/Gas (On shore)	MSAPMPER200B Work in accordance with an issued permit	MSAPMPER200C Work in accordance with an issued permit
	RII30411 Cert III in Resource Processing RII30112 Cert III in Surface Extraction Operations RII30111 Certificate III in Surface Extraction Operations	PMLOHS301B Work safely with instruments that emit ionising radiation	MSL943001A Work safely with instruments that emit ionizing radiation.
	RII21009 Cert II in Drilling Oil/Gas (Off shore) RII20909 Cert II in Drilling Operations RII20409 Cert II in Underground Metalliferous Mining	BSBWOR203A Work effectively with others	BSBWOR203B Work effectively with others
	RII60509 Advanced Diploma of Civil Construction Design RII50912 Diploma of Underground Coal Mining Management RII50909 Diploma of Underground Coal Mining Management RII50809 Diploma of Drilling Oil/Gas (On shore) RII50709 Diploma of Drilling Oil/Gas (Off shore) RII50609 Diploma	BSBWOR502A Ensure team effectiveness	BSBWOR502B Ensure team effectiveness

	of Drilling Operations RII50509 Diploma of Civil Construction Design RII50409 Diploma of Civil Construction Management RII50309 Diploma of Minerals Processing RII50209 Diploma of Underground Metalliferous Mining Management RII50109 Diploma of Surface Operations Management		
	RII60609 Advanced Diploma of Civil Construction RII60509 Advanced Diploma of Civil Construction Design RII60409 Advanced Diploma of Drilling Management	BSBSMB405A Monitor and manage small business operations	BSBSMB405B Monitor and manage small business operations
	RII50912 Diploma of Underground Coal Mining Management RII50909 Diploma of Underground Coal Mining Management RII50509 Diploma of Civil Construction Design RII50409 Diploma	BSBWOR501A Manage personal work priorities and professional development	BSBWOR501B Manage professional work priorities and professional development

	of Civil Construction Management RII50309 Diploma of Minerals Processing RII50209 Diploma of Underground Metalliferous Mining Management RII50109 Diploma of Surface Operations Management		
	RII30112 Cert III in Surface Extraction Operations RII30111 Cert III in Surface Extraction Operations	PMLORG301A Plan and conduct laboratory/field work	MSL913002A Plan and conduct laboratory/field work
	RII40909 Certificate IV in Drilling Operations	BSBRKG403B Set up a business or records system for a small business	BSBRKG403C Set up a business or records system for a small business
	RII40109 Certificate IV in Surface Extraction Operations RII20309 Certificate II in Underground Coal Mining	ICAU3126B Use advanced features of computer applications	ICAICT308A Use advanced features of computer applications
	RII31009 Certificate III in Bituminous Surfacing RII30912 Certificate III in Civil Construction RII30909 Certificate III in Civil Construction	BSBCUS301A Deliver and monitor a service to customers	BSBCUS301B Deliver and monitor a service to customers

	RII41109 Certificate IV in Drilling Oil/Gas (On shore) RII40909 Certificate IV in Drilling Operations RII40712 Certificate IV in Civil Construction Supervision RII40709 Certificate IV in Civil Construction Supervision RII40509 Certificate IV in Resource Processing RII40412 Certificate IV in Underground Coal Operations RII40212 Certificate IV in Surface Coal Mining (Open Cut Examiner) RII40209 Certificate IV in Surface Coal Mining (Open Cut Examiner) RII40109 Certificate IV in Surface Extraction Operations	BSBCUS401A Coordinate implementation of customer service strategies	BSBCUS401B Coordinate implementation of customer service strategies
	RII41109 Certificate IV in Drilling Oil/Gas (On shore) RII40909 Certificate IV in Drilling Operations RII40509 Certificate IV in Resource Processing RII40311 Certificate	TAAASS401C Plan and organise assessment	TAEASS401A Plan and organise assessment

	IV in Metalliferous Mining Operations (Underground) RII40212 Certificate IV in Surface Coal Mining (Open Cut Examiner) RII40209 Certificate IV in Surface Coal Mining (Open Cut Examiner) RII40109 Certificate IV in Surface Extraction Operations		
	RII31409 Certificate III in Road Construction and Maintenance RII30912 Certificate III in Civil Construction RII30909 Certificate III in Civil Construction	TLID1107C Conduct specialised forklift operations	TLID3011A Conduct specialised forklift operations

	RII41109 Certificate IV in Drilling Oil/Gas (On shore)	HLTFA301B Apply first aid	HLTFA301C Apply first aid
	RII41009 Certificate IV in Drilling Oil/Gas (Off shore)		
	RII40909 Certificate IV in Drilling Operations		
	RII40509 Certificate IV in Resource Processing		
	RII40311 Certificate IV in Metalliferous Mining Operations (Underground)		
	RII40109 Certificate IV in Surface Extraction Operations		
	RII31909 Certificate III in Drilling Oil/Gas (Off shore)		
	RII31809 Certificate III in Drilling Operations		
	RII30809 Certificate III in Civil Construction Plant Operations		
	RII30709 Certificate III in Mine Emergency Response and Rescue		
	RII30611 Certificate III in Small Mining Operations		
	RII30509 Certificate III in Mining Exploration		
	RII30112 Certificate		

	III in Surface Extraction Operations		
	RII30111 Certificate III in Surface Extraction Operations		
	RII21109 Certificate II in Drilling Oil/Gas (On shore)		
	RII21009 Certificate II in Drilling Oil/Gas (Off shore)		
	RII20909 Certificate II in Drilling Operations		
	RII20609 Certificate II in Mining Field/Exploration Operations		
	RII20409 Certificate II in Underground Metalliferous Mining		
	RII20109 Certificate II in Resources and Infrastructure Work Preparation		
	RII10109 Certificate I in Resources and Infrastructure Operations		

	RII41109 Certificate IV in Drilling Oil/Gas (On shore)	HLTFA402B Apply advanced first aid	HLTFA402C Apply advanced first aid
	RII41009 Certificate IV in Drilling Oil/Gas (Off shore)		
	RII40909 Certificate IV in Drilling Operations		
	RII40509 Certificate IV in Resource Processing		
	RII31909 Certificate III in Drilling Oil/Gas (Off shore)		
	RII31809 Certificate III in Drilling Operations		
	RII30709 Certificate III in Mine Emergency Response and Rescue		
	RII30509 Certificate III in Mining Exploration		
	RII20609 Certificate II in Mining Field/Exploration Operations		
	RII31409 Certificate III in Road Construction and Maintenance	FPIFGM3204A Fall trees manually (intermediate)	FPIFGM3212 Fall trees manually (intermediate)
	RII30912 Certificate III in Civil Construction		
	RII30909 Certificate III in Civil Construction		
	RII20712 Certificate		

	II in Civil Construction RII20709 Certificate II in Civil Construction		
	RII30912 Certificate III in Civil Construction	FPICOT2221B Trim and cross cut felled trees	FPICOT2239A Trim and cut felled trees
	RII30112 Surface Extraction Operations RII30311 Underground Metalliferous Mining RII30411 Resource Processing	FPPSTM2A Monitor and control boiler operations	FPPSTM210A Monitor and control boiler operation
	RII30411 Resource Processing	FPPSTM4A Troubleshoot ad rectify boiler plant systems	FPPSTM440A Troubleshoot and rectify boiler plant systems
	RII30411 Resource Processing	UEPOPS242A Operate and monitor dust collection plant	UEPOPS242B Operate and monitor dust collection plant
	RII41109 Certificate IV in Drilling Oil/Gas (On shore) RII32009 Certificate III in Drilling Oil/Gas (On shore) RII30411 Certificate III in Resource Processing RII30311 Certificate III in Underground Metalliferous	MSAPMPER300B Issue work permits	MSAPMPER300C Issue work permits

	Mining RII30112 Certificate III in Surface Extraction Operations		
	RII30411 Certificate III in Resource Processing	UEPOPS316A Operate and monitor boiler steam/water cycle	UEPOPS316B Operate and monitor boiler steam/water cycle
	RII30709 Certificate III in Mine Emergency Response and Rescue	PUAFIR307A Monitor hazardous atmospheres	PUAFIR307B Monitor hazardous atmospheres
	RII40809 Certificate IV in Civil Construction Design RII40712 Certificate IV in Civil Construction Supervision RII40709 Certificate IV in Civil Construction Supervision RII40609 Certificate IV in Civil Construction Operations	PMLTEST403A Assist with geotechnical site investigations	PMLTEST403B Assist with geotechnical site investigations
	RII31809 Certificate III in Drilling Operations RII20909 Certificate II in Surface Extraction Operations	RIINHB211A Assist mud rotary boring	RIINHB211B Assist mud rotary drilling
	RII30709 Certificate III in Mine Emergency Response and Rescue	Missing prerequisite for PUAFIR207B Operate breathing apparatus open circuit	PUAFIR201B Prevent injury

	RII30709 Certificate III in Mine Emergency Response and Rescue	Missing prerequisite for PUASAR024A Undertake road crash rescue	PUASAR022A Participate in a rescue operation
	RII30709 Certificate III in Mine Emergency Response and Rescue	Missing prerequisite for PUASAR025A Undertake confined space rescue	PUASAR022A Participate in a rescue operation
	RII30709 Certificate III in Mine Emergency Response and Rescue	Missing prerequisite for PUASAR032A Undertake vertical rescue	PUASAR022A Participate in a rescue operation
	RII30709 Certificate III in Mine Emergency Response and Rescue	Missing prerequisite for PUAFIR306B Render hazardous materials incidents safe	PUAFIR308B Employ Personal Protection at a Hazardous Materials Incident
3.2	RII20712 Cert II Civil Construction RII30912 Cert III Civil Construction RII31409 Cert III Road Construction and Maintenance RII32109 Cert III Timber Bridge Construction Maintenance	FPICOT2221B Trim and cut felled trees	FPICOT2239A Trim and cut felled trees
	RII30912 Cert III Civil Construction	UEGNSG202A Construct and lay distribution pipelines	UEGNSG202B Construct and lay distribution pipelines
	RII30411 Cert III Resources Processing	FPPSTM4A Troubleshoot and rectify boiler plant systems	FPPSTM440A Troubleshoot and rectify boiler plant systems
	RII30411 Cert III Resource Processing	UEPOPS316A Operate and monitor boiler	UEPOPS316B Operate and monitor boiler steam/water

		steam/water	
	RII21109 Cert II Drilling Oil/Gas (On shore)	MSAPMPER200B Work in accordance with an issued permit	MSAPMPER200C Work in accordance with an issued permit
	RII30411 Cert III in Resource Processing RII30112 Cert III in Surface Extraction Operations RII30111 Certificate III in Surface Extraction Operations	PMLOHS301B Work safely with instruments that emit ionising radiation	MSL943001A Work safely with instruments that emit ionizing radiation.
	RII21009 Cert II in Drilling Oil/Gas (Off shore) RII20909 Cert II in Drilling Operations RII20409 Cert II in Underground Metalliferous Mining	BSBWOR203A Work effectively with others	BSBWOR203B Work effectively with others
	RII60509 Advanced Diploma of Civil Construction Design RII50912 Diploma of Underground Coal Mining Management RII50909 Diploma of Underground Coal Mining Management RII50809 Diploma of Drilling Oil/Gas (On shore) RII50709 Diploma of Drilling Oil/Gas (Off shore) RII50609 Diploma	BSBWOR502A Ensure team effectiveness	BSBWOR502B Ensure team effectiveness

	of Drilling Operations		
	RII50509 Diploma of Civil Construction Design		
	RII50409 Diploma of Civil Construction Management		
	RII50309 Diploma of Minerals Processing		
	RII50209 Diploma of Underground Metalliferous Mining Management		
	RII50109 Diploma of Surface Operations Management		
	RII60609 Advanced Diploma of Civil Construction	BSBSMB405A Monitor and manage small business operations	BSBSMB405B Monitor and manage small business operations
	RII60509 Advanced Diploma of Civil Construction Design		
	RII60409 Advanced Diploma of Drilling Management		
	RII50912 Diploma of Underground Coal Mining Management	BSBWOR501A Manage personal work priorities and professional development	BSBWOR501B Manage professional work priorities and professional development
	RII50909 Diploma of Underground Coal Mining Management		
	RII50509 Diploma of Civil Construction Design		
	RII50409 Diploma		

	of Civil Construction Management RII50309 Diploma of Minerals Processing RII50209 Diploma of Underground Metalliferous Mining Management RII50109 Diploma of Surface Operations Management		
	RII30112 Cert III in Surface Extraction Operations RII30111 Cert III in Surface Extraction Operations	PMLORG301A Plan and conduct laboratory/field work	MSL913002A Plan and conduct laboratory/field work
	RII40909 Certificate IV in Drilling Operations	BSBRKG403B Set up a business or records system for a small business	BSBRKG403C Set up a business or records system for a small business
	RII40109 Certificate IV in Surface Extraction Operations RII20309 Certificate II in Underground Coal Mining	ICAU3126B Use advanced features of computer applications	ICAICT308A Use advanced features of computer applications
	RII31009 Certificate III in Bituminous Surfacing RII30912 Certificate III in Civil Construction RII30909 Certificate III in Civil Construction	BSBCUS301A Deliver and monitor a service to customers	BSBCUS301B Deliver and monitor a service to customers

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	RII41109 Certificate IV in Drilling Oil/Gas (On shore)	BSBCUS401A Coordinate implementation of customer service strategies	BSBCUS401B Coordinate implementation of customer service strategies
	RII40909 Certificate IV in Drilling Operations		
	RII40712 Certificate IV in Civil Construction Supervision		
	RII40709 Certificate IV in Civil Construction Supervision		
	RII40509 Certificate IV in Resource Processing		
	RII40412 Certificate IV in Underground Coal Operations		
	RII40212 Certificate IV in Surface Coal Mining (Open Cut Examiner)		
	RII40209 Certificate IV in Surface Coal Mining (Open Cut Examiner)		
	RII40109 Certificate IV in Surface Extraction Operations		
	RII41109 Certificate IV in Drilling Oil/Gas (On shore)	TAAASS401C Plan and organise assessment	TAEASS401A Plan and organise assessment
	RII40909 Certificate IV in Drilling Operations		
	RII40509 Certificate IV in Resource Processing		
	RII40311 Certificate		

	IV in Metalliferous Mining Operations (Underground) RII40212 Certificate IV in Surface Coal Mining (Open Cut Examiner) RII40209 Certificate IV in Surface Coal Mining (Open Cut Examiner) RII40109 Certificate IV in Surface Extraction Operations		
	RII31409 Certificate III in Road Construction and Maintenance RII30912 Certificate III in Civil Construction RII30909 Certificate III in Civil Construction	TLID1107C Conduct specialised forklift operations	TLID3011A Conduct specialised forklift operations

		HLTFA301B Apply first aid	HLTFA301C Apply first aid
	RII41109 Certificate IV in Drilling Oil/Gas (On shore)		
	RII41009 Certificate IV in Drilling Oil/Gas (Off shore)		
	RII40909 Certificate IV in Drilling Operations		
	RII40509 Certificate IV in Resource Processing		
	RII40311 Certificate IV in Metalliferous Mining Operations (Underground)		
	RII40109 Certificate IV in Surface Extraction Operations		
	RII31909 Certificate III in Drilling Oil/Gas (Off shore)		
	RII31809 Certificate III in Drilling Operations		
	RII30809 Certificate III in Civil Construction Plant Operations		
	RII30709 Certificate III in Mine Emergency Response and Rescue		
	RII30611 Certificate III in Small Mining Operations		
	RII30509 Certificate III in Mining Exploration		
	RII30112 Certificate		

	III in Surface Extraction Operations		
	RII30111 Certificate III in Surface Extraction Operations		
	RII21109 Certificate II in Drilling Oil/Gas (On shore)		
	RII21009 Certificate II in Drilling Oil/Gas (Off shore)		
	RII20909 Certificate II in Drilling Operations		
	RII20609 Certificate II in Mining Field/Exploration Operations		
	RII20409 Certificate II in Underground Metalliferous Mining		
	RII20109 Certificate II in Resources and Infrastructure Work Preparation		
	RII10109 Certificate I in Resources and Infrastructure Operations		

	RII41109 Certificate IV in Drilling Oil/Gas (On shore)	HLTFA402B Apply advanced first aid	HLTFA402C Apply advanced first aid
	RII41009 Certificate IV in Drilling Oil/Gas (Off shore)		
	RII40909 Certificate IV in Drilling Operations		
	RII40509 Certificate IV in Resource Processing		
	RII31909 Certificate III in Drilling Oil/Gas (Off shore)		
	RII31809 Certificate III in Drilling Operations		
	RII30709 Certificate III in Mine Emergency Response and Rescue		
	RII30509 Certificate III in Mining Exploration		
	RII20609 Certificate II in Mining Field/Exploration Operations		
	RII31409 Certificate III in Road Construction and Maintenance	FPIFGM3204A Fall trees manually (intermediate)	FPIFGM3212 Fall trees manually (intermediate)
	RII30912 Certificate III in Civil Construction		
	RII30909 Certificate III in Civil Construction		
	RII20712 Certificate II in Civil		

	Construction RII20709 Certificate II in Civil Construction		
	RII30912 Certificate III in Civil Construction	FPICOT2221B Trim and cross cut felled trees	FPICOT2239A Trim and cut felled trees
	RII30112 Surface Extraction Operations RII30311 Underground Metalliferous Mining RII30411 Resource Processing	FPPSTM2A Monitor and control boiler operations	FPPSTM210A Monitor and control boiler operation
	RII30411 Resource Processing	FPPSTM4A Troubleshoot ad rectify boiler plant systems	FPPSTM440A Troubleshoot and rectify boiler plant systems
	RII30411 Resource Processing	UEPOPS242A Operate and monitor dust collection plant	UEPOPS242B Operate and monitor dust collection plant
	RII41109 Certificate IV in Drilling Oil/Gas (On shore) RII32009 Certificate III in Drilling Oil/Gas (On shore) RII30411 Certificate III in Resource Processing RII30311 Certificate III in Underground Metalliferous	MSAPMPER300B Issue work permits	MSAPMPER300C Issue work permits

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	Mining RII30112 Certificate III in Surface Extraction Operations		
	RII30411 Certificate III in Resource Processing	UEPOPS316A Operate and monitor boiler steam/water cycle	UEPOPS316B Operate and monitor boiler steam/water cycle
	RII30709 Certificate III in Mine Emergency Response and Rescue	PUAFIR307A Monitor hazardous atmospheres	PUAFIR307B Monitor hazardous atmospheres
	RII40809 Certificate IV in Civil Construction Design RII40712 Certificate IV in Civil Construction Supervision RII40709 Certificate IV in Civil Construction Supervision RII40609 Certificate IV in Civil Construction Operations	PMLTEST403A Assist with geotechnical site investigations	PMLTEST403B Assist with geotechnical site investigations
	RII31809 Certificate III in Drilling Operations RII20909 Certificate II in Surface Extraction Operations	RIINHB211A Assist mud rotary boring	RIINHB211B Assist mud rotary drilling
	RII30709 Certificate III in Mine Emergency Response and Rescue	Missing prerequisite for PUAFIR207B Operate breathing apparatus open circuit	PUAFIR201B Prevent injury

	RII30709 Certificate III in Mine Emergency Response and Rescue	Missing prerequisite for PUASAR024A Undertake road crash rescue	PUASAR022A Participate in a rescue operation
	RII30709 Certificate III in Mine Emergency Response and Rescue	Missing prerequisite for PUASAR025A Undertake confined space rescue	PUASAR022A Participate in a rescue operation
	RII30709 Certificate III in Mine Emergency Response and Rescue	Missing prerequisite for PUASAR032A Undertake vertical rescue	PUASAR022A Participate in a rescue operation
	RII30709 Certificate III in Mine Emergency Response and Rescue	Missing prerequisite for PUAFIR306B Render hazardous materials incidents safe	PUAFIR308B Employ Personal Protection at a Hazardous Materials Incident

Introduction to the Industry

The resources and infrastructure industry includes operations in:

- Metalliferous Mining (including Mineral Exploration and Metalliferous Processing)
- Coal Mining (including Coal Handling and Preparation)
- Drilling
- Quarrying (extractive industries)
- Civil Construction

The Resources and Infrastructure Industry contributes 39% of the nation's exports and 8% of GDP.

The National Resources Sector Employment Taskforce Resourcing the Future Report released in July 2010, reported that the major resources projects underway, or likely to be sanctioned before the end of 2015, will create numerous jobs but have different requirements in the construction and operational phases. Taskforce analysis shows:

- construction jobs on new projects could peak at 45,000 in 2012 and 2013
- employment growth in mining operations is expected to be 4.9 per cent per annum over the next five years, creating around 61,500 new jobs by 2015

A brief overview of each industry sector is provided below.   For further information refer to the SkillsDMC Environmental Scan available at www.skillsdmc.com.au.

Metalliferous Mining Industry

The Metalliferous Mining sector includes metals, industrial minerals and semiprecious stones and covers the following activities:

· open cut mining
· underground mining
· mine development
· processing - primary/secondary/tertiary
· haulage and transport on site
· site rehabilitation
· blasting
· production and development drilling.

Metallic minerals include: bauxite, iron ore, lead concentrate, mineral sands, beneficiated ilmenite, ilmenite concentrate, leucoxene concentrate, rutile concentrate, zircon concentrate, zinc concentrate and zinc-lead concentrate.

Australia is the world's leading producer of bauxite and alumina, diamonds (by volume), ilmenite, rutile and zircon. It is the second largest producer of iron ore, the third largest producer of aluminium, iron ore, nickel and gold. Australia's volume of export of these commodities overseas means it has the largest bulk commodity mineral shipping task of any nation in the world.

  Significant infrastructure development has occurred in the sector. Since 1967, the industry has built 25 towns, 12 ports, 25 airfields and over 2000 kilometres of rail line as well as additional port bulk handling infrastructure in many existing ports. The industry is often the sole provider of social infrastructure - health, education and welfare - in remote areas of Australia ; infrastructure that often endures past the completion of mining activities.

The Australian Mining Industry is heavily regulated at both federal and state/territory level. State/territory Governments are responsible for regulatory issues such as occupational health and safety, and environmental concerns. Activities for such issues are generally administered by the state/territory's Department of Mineral Resources (or its equivalent).

The mining industry is also open to native title land claims under the *Native Title Act 1994* (commonly known as Mabo legislation). The Act recognises that Indigenous people have rights to the land which they occupied prior to and continuously since European settlement in 1788.

Regulations governing environmental protection (including taxes, levies, fines and licences) have increased in recent years; they will continue to increase and, significantly, do so in the immediate future. The increased emphasis on environmental issues has raised the importance of remediation work for the mining and minerals processing industry.

Despite the high level of expenditure and commitment to training for workers, the industry will experience skill shortages due to rapid advancement of technology and areas requiring specialised and experienced workers. The mining and minerals processing sector relies on a higher proportion of highly skilled workers than that of low skilled workers, and a lesser amount on middle skill level workers but is experiencing an overall decline in the numbers within the workforce and although there is currently a reliance on highly skilled workers, there are changes occurring within the employment structure.

The major factors contributing to skill shortages appear to be:

· insufficient numbers in training ; low awareness of the sector at both a secondary and tertiary level

· attrition from the ranks of skilled workers

· ageing workforce

· rapid changes in the breadth of the skills required in what is a rapidly changing technological environment

· low level of industry involvement/support due to competitive pressures

· lack of RTO capacity to provide training to fully meet the needs of the industry

· misperception of the working environment in mining, remote locations

· lack of addressing the skills gap within the sector

· lack of access to global skills supply.

Coal Mining Industry

Coal is mined in all Australian States.

In the Eastern States coal is dominant amongst the export industries.. Australia 's high-quality, low sulphur coals attract overseas buyers who are conscious of the need to minimise environmental impacts.

The Australian Coal Association has reported that Australia's black coal exports were worth almost $A43 billion in 2010, second only to iron ore ($A49 billion) as Australia's biggest export earner for that year.   Black coal represented 15% of the total value of Australia's exports of goods and services in 2010. This represents 31% of the world total coal exports. Queensland is the major producer of coal.   In NSW the major mining activity is black coal. The upper Hunter Valley supplies 80 per cent of New South Wales's coal. 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.

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.

Drilling Industry

Drilling involves the use of heavy machinery to break through the earths surface. It is an essential industry.

Drilling is carried out in every State and Territory of Australia, including the Antarctic, and in the seas surrounding it.

The industry has the following sectors:

- blast hole drilling
- environmental drilling
- foundation/construction drilling (including piling)
- geotechnical drilling
- mineral exploration
- mineral production
- oil, gas and geothermal, off shore
- oil, gas and geothermal, on shore
- raiseboring
- seismic
- trenchless technology (including horizontal directional drilling)
- water well drilling.

The drilling industry has its own identity and supports the activities of a range of other industries.

Drilling results define mineral reserves for future mining prospects, and play a key role in the extraction process. Drillers access ground water supply for commercial, domestic, stock, irrigation or town water supply use. Water well drilling provides water supply for most of rural and regional Australia, and significant urban water (for example, 78% of Perth's water, and 92% of Darwin's), a particularly vital issue in Australia, the world's driest continent.

Drillers carry out site investigation drilling to allow the design of foundations and to ensure the stability of major civil works such as bridges and buildings. Pile driving and extraction plays an important role in irrigation and environment solutions to water conservation and land erosion. Environmental drilling defines areas of suspected contaminated land, the first stage in the remediation process. Drillers help to locate areas of sub-surface contamination and assist in the remediation process.

Drilling defines and accesses vital oil, gas and geothermal power for domestic and commercial uses both nationally and internationally. Trenchless technology/horizontal directional drilling supports the utilities and communications industries, and contributes to the transmission of energy resources.

The majority of drilling contractors work in more than one sector of drilling.

The industry has some salient features which impact strongly on its operations:

- a high number of employees who have been employed in the industry for many years, but have rarely been employed in one company for a prolonged period;
- a high turnover of employees at individual company level;
- a largely rural/regional work circumstance;
- a very highly mobile workplace (rigs move all the time);
- high plant costs and high consumables costs;
- heavy work and high insurance costs;
- a very high proportion of people who run micro-businesses;
- only recent access to a means of providing national qualifications to personnel
- limited RTO capacity to meet training needs
- regulatory compliance requirements aligned to the national competency framework

Quarrying Industry

Quarries provide earth materials such as civil grade aggregate, dimensional stone, agricultural limestone, sand, gravel, crushed rock and clay that are processed into raw material inputs for buildings and construction, agriculture and industrial processes. Approximately 90% of the output from quarries in Australia is used in the building and construction industries.

The majority of the approximate 2,600 quarries in Australia are located within 100 km of main cities and town centres which assists in minimising the cost of buildings and infrastructure development.

The industry comprises of quarry operators and equipment and service providers. Quarry operators range from large multi-national companies operating throughout Australia's metropolitan and provincial centres to small family owned quarries and municipal quarries serving provincial and rural markets. Over 7,000 personnel are employed within the industry.

The majority of quarry operations are small with 10 employees or less at each site. Many quarries operate with two to four staff and employ contractors to provide periodic services such as drilling, blasting and maintenance

Quarrying is a natural resource industry, conducted not in isolation but as part of a chain of inter-connected activities. These extend from the finding and securing of earth resources, to processing and the manufacture and transportation of simple as well as sophisticated construction and building materials, to the interactions and impacts on surrounding communities and ultimately to recycling and post extractive end-uses where old quarries are put to new uses.

Australian companies were amongst the first in the world to identify the inherent value of the integration of quarrying with downstream construction material manufacturing such as pre-mixed concrete and to develop and globally apply business models that could harness such value adding. In the space of several decades Australian quarrying and construction materials companies have forged an international presence and identity to become pre-eminent amongst the world's integrated construction materials companies.

This continual development and export of technical expertise acquired through generations of innovation, hard work and with major contributions from migrants to Australia, is a realisation of the clever country vision. This legacy continues. With origins that pre-date the arrival of Europeans by thousands of years, the Australian quarrying industry continues to create rock products that enhance the quality of life for our communities

Civil Construction Industry

The Civil Construction industry plays a large part in Australia's economic life; it is an integral component in the infrastructure essential for our day to day living. Those working in the industry are primarily engaged in civil engineering work on infrastructure-related projects covering such diverse fields as roads, subdivisions, bridgeworks, railways, harbours, sewerage and drainage, electrical infrastructure, pipelines and recreation works.

Civil construction is the most significant participant in the built environment active across a range of sectors - the commercial sector, as well as Local and State Government. It is also associated with industries such as mining.

Governments are committing substantial funds to building civil infrastructure such as roads, ports, bridges and rail, as well as opening up new sub-divisions and maintaining existing structures. Infrastructure is also a key component of the productivity agenda and will be a critical part of providing for population projections that have Australia as home to 35 million people by 2050.

While there are no detailed figures available in relation to the size of the civil construction workforce as a separate and discrete workforce, the data obtained through a workforce analysis conducted by the Civil Contractors Federation, indicates that the size of the workforce is approximately 350,000 with occupations including design and supervisory positions, plant operations and other technical and support roles. On very conservative estimates this suggests that civil construction makes up 30% to 40% or more of the building and construction workforce.

Key areas of operation include bridge construction, road construction, pipe laying, tunnel construction and the occupation of plant operators across all areas of activity. Additionally, plant hire and civil engineering project management are significant areas of activity.

Buoyant activity and strong investment in the industry drives continued employment growth. A significant factor in this is the fact that approximately 94% of enterprises operating in the Civil Construction sector employ 5 or fewer employees. The CCF occupation review reported that 30% of the industry had major difficulty recruiting labour and sourcing sub-contractors; therefore recruitment of qualified labour (including professional and supervisory staff) remains the dominant supply constraint for the industry.

There are significant changes in industry technology contributing to significant enhancement of existing practices and operations, or diversification of work organisation models (for example, via multifunctional plant and equipment requiring new and effective work models). Work demands on this vital industry sector will continue to grow as outsourcing of government activities related to Civil Construction continue to increase.

Preliminary Information

Important Note to Users

Training Packages are not static documents; they are amended periodically to reflect the latest industry practices and are version controlled. It is essential that the latest version is always used.

Check the version number before commencing training or assessment

This Training Package is Version 3.0 - check whether this is the latest version by going to the national training information service (www.training.gov.au) and locating information about the Training Package. Alternatively, contact SkillsDMC (Resources and Infrastructure Industry Skills Council) at http://www.skillsdmc.com.au to confirm the latest version number.

Explanation of version number conventions

The primary release Training Package is Version 1. When changes are made to a Training Package, sometimes the version number is changed and sometimes it is not, depending on the extent of the change. When a Training Package is reviewed it is considered to be a new Training Package for the purposes of version control, and is Version 1. Do not confuse the version number with the Training Packages national code (which remains the same during its period of endorsement).

Explanation of the review date

The review date (shown on the title page and in the header 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.

Training Package Code:	RII09
Training Package Name:	Resources and Infrastructure Industry Training Package
First Published:	2009
AEShareNet Code:	TBA
Print Version Number:	3.0
Endorsed Date:	24th February 2012
Copyright Year:	2009
Training Package Review Date:	7 July 2012
ISC Name:	SkillsDMC – Resources and Infrastructure Industry Skills Council
ISC Website URL:	www.skillsdmc.com.au

Training Package Volume Number	**Training Package Volume Name**
1	Introduction
2	General Fields of Competence Applicable to All Sectors
3	Technical Fields of Competence Applicable to All Sectors
4	Technical Fields of Competence Applicable to Some Sectors
5	Technical Fields of Competence Applicable to a Single Sector (Civil Construction and Coal Mining)

Training Package Volume Number	Training Package Volume Name
6	Technical Fields of Competence Applicable to a Single Sector (Metalliferous Mining and Drilling)

History

This training package is the result of the rationalisation and consolidation of five Resources and Infrastructure Training Packages: RII06 Civil Construction Training Package, V1, release date 14 July 2006; MNQ03 Extractive Industries Training Package, V1.1, release date 18 January 2008; MNM05 Metalliferous Mining Training Package, Version 1.1, release date 6 April 2007; DRT03 Drilling Training Package, Version 2, release date 25 May 2007; MNC04 Coal Training Package, version 2, release date 16 January 2008; BCC03 Civil Construction Training Package, version 3, release date 07 September 2007.

This RII09 Resources and Infrastructure Industry Training Package covers Skill Sets and AQF level qualifications at Certificate I, Certificate II, Certificate III, Certificate IV, Diploma and Advanced Diploma.

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Published by: SkillsDMC
Release Date: 29/05/2013

Mapping to Previous Training Package

Mapping to Previous Version of the Training Package

Mapping of RII09 Version 2.0 Training Package to RII09 Version 3.0 Training Package			
Equivalence Code		*EQU = Equivalent*	
		NEW = New to meet industry need	
		NEQ = Not equivalent but similar outcomes	
		NC = No change	
Version 2.0 – Skill Sets	*Version 3.0 – Skill Sets*		*Equivalence*
Skill Set Mine Surveying	Skill Set Mine Surveying		NC
Skill Set Leading Hand	Skill Set Leading Hand		NC
Skill Set Rouseabout Off Shore Oil and Gas	Skill Set Rouseabout Off Shore Oil and Gas		NC
Skill Set Site Health and Safety Coordinator	Skill Set Site Health and Safety Coordinator		NC
Skill Set Surface Shotfiring	Skill Set Surface Shotfiring		NC
Skill Set Underground Shotfiring – Coal	Skill Set Underground Shotfiring – Coal		NC
Skill Set Underground Shotfiring – Metalliferous	Skill Set Underground Shotfiring – Metalliferous		NC
Skill Set Supervision of Indigenous Employees	Skill Set Supervision of Indigenous Employees		NC
	Skill Set Explosion Protected Diesel Engine Systems Maintenance		NEW
	Skill Set Work Zone Traffic Control – Road Labourer		NEW

Mapping to Previous Version of the Training Package

	Skill Set Work Zone Traffic Control – Traffic Controller			NEW
	Skill Set Work Zone Traffic Control – Implement Traffic Control Guidance Plan			NEW
	Skill Set Work Zone Traffic Control – Supervisor			NEW
	Skill Set Work Zone Traffic Control Guidance Plan – Developer			NEW
	Skill Set Work Zone Traffic Control – Auditor / Inspector			NEW
	Skill Set Surface Coal Mine Safety			NEW
	Skill Set Underground Coal Mine Safety			NEW

Version 2.0 – Qualifications	*Version 3.0 – Qualifications*	*Equivalence*

Certificate I Qualifications

RII10109 Certificate I in Resources and Infrastructure Operations	RII10109 Certificate I in Resources and Infrastructure Operations	NC

Certificate II Qualifications

RII20109 Certificate II in Resources and Infrastructure Work Preparation	RII20109 Certificate II in Resources and Infrastructure Work Preparation	NC
RII20209 Certificate II in Surface Extraction Operations	RII20209 Certificate II in Surface Extraction Operations	NC

Mapping to Previous Version of the Training Package			
RII20309 Certificate II in Underground Coal Mining	RII20309 Certificate II in Underground Coal Mining		NC
RII20409 Certificate II in Underground Metalliferous Mining	RII20409 Certificate II in Underground Metalliferous Mining		NC
RII20509 Certificate II in Resource Processing	RII20509 Certificate II in Resource Processing		NC
RII20609 Certificate II in Mining Field/Exploration Operations	RII20609 Certificate II in Mining Field/Exploration Operations		NC
RII20709 Certificate II in Civil Construction	RII20712 Certificate II in Civil Construction		NC
RII20809 Certificate II in Bituminous Surfacing	RII20809 Certificate II in Bituminous Surfacing		NC
RII20909 Certificate II in Drilling Operations	RII20909 Certificate II in Drilling Operations		NC
RII21009 Certificate II in Drilling Oil/Gas (Off shore)	RII21009 Certificate II in Drilling Oil/Gas (Off shore)		NC
RII21109 Certificate II in Drilling Oil/Gas (On shore)	RII21109 Certificate II in Drilling Oil/Gas (On shore)		NC
Certificate III Qualifications			
RII30111 Certificate III in Surface Extraction Operations	RII30112 Certificate III in Surface Extraction Operations		EQU
RII30209 Certificate III in Underground Coal Operations	RII30212 Certificate III in Underground Coal Operations		EQU
RII30311 Certificate III in Underground Metalliferous Mining	RII30311 Certificate III in Underground Metalliferous Mining		NC
RII30411 Certificate III in Resource Processing	RII30411 Certificate III in Resource Processing		NC

Mapping to Previous Version of the Training Package			
RII30509 Certificate III in Mining Exploration	RII30509 Certificate III in Mining Exploration		NC
RII30611 Certificate III in Small Mining Operations	RII30611 Certificate III in Small Mining Operations		NC
RII30709 Certificate III in Mine Emergency Response and Rescue	RII30709 Certificate III in Mine Emergency Response and Rescue		NC
RII30809 Certificate III in Civil Construction Plant Operations	RII30809 Certificate III in Civil Construction Plant Operations		NC
RII30909 Certificate III in Civil Construction	RII30912 Certificate III in Civil Construction		EQU
RII31009 Certificate III in Bituminous Surfacing	RII31009 Certificate III in Bituminous Surfacing		NC
RII31109 Certificate III in Bridge Construction and Maintenance	RII31109 Certificate III in Bridge Construction and Maintenance		NC
RII31209 Certificate III in Civil Foundations	RII31209 Certificate III in Civil Foundations		NC
RII31309 Certificate III in Pipe Laying	RII31309 Certificate III in Pipe Laying		NC
RII31409 Certificate III in Road Construction and Maintenance	RII31409 Certificate III in Road Construction and Maintenance		NC
RII31509 Certificate III in Road Marking	RII31509 Certificate III in Road Marking		NC
RII31609 Certificate III in Trenchless Technology	RII31609 Certificate III in Trenchless Technology		NC
RII31709 Certificate III in Tunnel Construction	RII31709 Certificate III in Tunnel Construction		NC
RII31809 Certificate III in Drilling Operations	RII31809 Certificate III in Drilling Operations		NC

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Mapping to Previous Version of the Training Package			
RII31909 Certificate III in Drilling Oil/Gas (Off shore)	RII31909 Certificate III in Drilling Oil/Gas (Off shore)		NC
RII32009 Certificate III in Drilling Oil/Gas (On shore)	RII32009 Certificate III in Drilling Oil/Gas (On shore)		NC
RII32109 Certificate III in Timber Bridge Construction and Maintenance	RII32109 Certificate III in Timber Bridge Construction and Maintenance		NC
Certificate IV Qualifications			
RII40109 Certificate IV in Surface Extraction Operations	RII40109 Certificate IV in Surface Extraction Operations		NC
RII40209 Certificate IV in Surface Coal Mining (Open Cut Examiner)	RII40212 Certificate IV in Surface Coal Mining (Open Cut Examiner)		EQU
RII40311 Certificate IV in Metalliferous Mining Operations (Underground)	RII40311 Certificate IV in Metalliferous Mining Operations (Underground)		NC
RII40411 Certificate IV in Underground Coal Operations	RII40412 Certificate IV in Underground Coal Operations		EQU
RII40509 Certificate IV in Resource Processing	RII40509 Certificate IV in Resource Processing		NC
RII40609 Certificate IV in Civil Construction Operations	RII40609 Certificate IV in Civil Construction Operations		NC
RII40709 Certificate IV in Civil Construction Supervision	RII40712 Certificate IV in Civil Construction Supervision		EQU
RII40809 Certificate IV in Civil Construction Design	RII40809 Certificate IV in Civil Construction Design		NC
RII40909 Certificate IV in Drilling Operations	RII40909 Certificate IV in Drilling Operations		NC
RII41009 Certificate IV in Drilling Oil/Gas (Off shore)	RII41009 Certificate IV in Drilling Oil/Gas (Off shore)		NC

Mapping to Previous Version of the Training Package			
RII41109 Certificate IV in Drilling Oil/Gas (On shore)	RII41109 Certificate IV in Drilling Oil/Gas (On shore)		NC
Diploma Qualifications			
RII50109 Diploma of Surface Operations Management	RII50109 Diploma of Surface Operations Management		NC
RII50209 Diploma of Underground Metalliferous Mining Management	RII50209 Diploma of Underground Metalliferous Mining Management		NC
RII50309 Diploma of Minerals Processing	RII50309 Diploma of Minerals Processing		NC
RII50409 Diploma of Civil Construction Management	RII50409 Diploma of Civil Construction Management		NC
RII50509 Diploma of Civil Construction Design	RII50509 Diploma of Civil Construction Design		NC
RII50609 Diploma of Drilling Operations	RII50609 Diploma of Drilling Operations		NC
RII50709 Diploma of Drilling Oil/Gas (Off shore)	RII50709 Diploma of Drilling Oil/Gas (Off shore)		NC
RII50809 Diploma of Drilling Oil/Gas (On shore)	RII50809 Diploma of Drilling Oil/Gas (On shore)		NC
RII50909 Diploma of Underground Coal Mining Management	RII50912 Diploma of Underground Coal Mining Management		EQU
Advance Diploma Qualifications			
RII60109 Advanced Diploma of Metalliferous Mining	RII60109 Advanced Diploma of Metalliferous Mining		NC
RII60209 Advanced Diploma of Extractive Industries Management	RII60209 Advanced Diploma of Extractive Industries Management		NC

Mapping to Previous Version of the Training Package

RII60309 Advanced Diploma of Underground Coal Mining Management	RII60312 Advanced Diploma of Underground Coal Mining Management		EQU
RII60409 Advanced Diploma of Drilling Management	RII60409 Advanced Diploma of Drilling Management		NC
RII60509 Advanced Diploma of Civil Construction Design	RII60509 Advanced Diploma of Civil Construction Design		NC
RII60609 Advanced Diploma of Civil Construction	RII60609 Advanced Diploma of Civil Construction		NC
RII60709 Advanced Diploma of Surface Coal Mining Management	RII60709 Advanced Diploma of Surface Coal Mining Management		NC

Mapping of RII09 Version 2.0 Units of Competency to RII09 Version 3.0 Units of Competency

Note: This table only includes units where there has been a change between Versions 2.0 and 3.0

Equivalence Code	*EQU = Equivalent*
	NEW = New to meet industry need
	NEQ = Not equivalent but similar outcomes
	IMP = *Imported* unit updated from originating TP

Version 2.0 Unit Code	*Version 2.0 Unit Title*	*Version 3.0 Unit Code*	*Version 3.0 Unit Title*		*Equivalence*
1. General Fields of Competence Applicable to All Sectors					
1.1 Risk Management – RIIRIS					

Mapping to Previous Version of the Training Package				
RIIRIS301A	Apply risk management processes	RIIRIS301B	Apply risk management processes	EQU
1.3 Occupational Health and Safety – RIIOHS				
MSAPMPER300B	Issue work permits	MSAPMPER300	Issue work permits	IMP
1.8 Business Effectiveness – RIIBEF				
BSBWOR404A	Develop work priorities	BSBWOR404B	Develop work priorities	IMP
1.10 Information Management – RIIIMG				
TLIA907E	Complete and check import/export documentation	TLID2022A	Complete and check import/export documentation	IMP
1.13 Training and Assessment				
TAAASS301B	Contribute to assessment	TAEASS301B	Contribute to assessment	IMP
TAAASS402C	Assess competence	TAEASS402B	Assess competence	IMP
TAAASS404B	Participate in assessment validation	TAEASS403B	Participate in assessment validation	IMP
TAADEL301C	Provide training through instruction and demonstration of work skills	TAEDEL301A	Provide work skill instruction	IMP
2. Technical Fields of Competence Applicable to All Sectors				
2.1 Blast Hole Drilling – RIIBHD				
RIIBHD304A	Set up and prepare for open cut drilling	RIIBHD304B	Set up and prepare for open cut	EQU

Mapping to Previous Version of the Training Package

	operations		drilling operations	
		RIIBHD305	Conduct down-hole hammer drilling	NEW
2.2 Blasting – RIIBLA				
RIIBLA203A	Conduct mobile mixing of explosives	RIIBLA203B	Conduct mobile mixing of explosives	EQU
2.3 Service and Maintenance – RIISAM				
RIISAM203A	Use hand and power tools	RIISAM203B	Use hand and power tools	EQU
RIISAM204A	Operate small plant and equipment	RIISAM204B	Operate small plant and equipment	EQU
RIISAM206A	Operate equipment services vehicle underground	RIIVEH203A	Operate a light vehicle underground	EQU
2.4 Load Handling – RIIHAN				
TLID2207C	Conduct weighbridge operations	RLID2022A	Conduct weighbridge operations	IMP
2.5 Vehicle Operations – RIIVEH				
RIIVEH203A	Operate light vehicle underground	RIIVEH203B	Operate light vehicle underground	EQU
RIIVEH304A	Conduct tip truck operations	RIIVEH304B	Conduct tip truck operations	EQU
2.6 Sampling, Testing & Data Processing & Recording – RIISTD				
PMLDATA400A	Process and interpret data	MSL924001A	Process and interpret data	IMP

Mapping to Previous Version of the Training Package					
PMLDATA500B	Analyse data and report results	MSL925001A	Analyse data and report results		IMP
PMLORG600B	Supervise laboratory operations in work/functional area	MSL916003A	Supervise laboratory operations in work/functional area		IMP
PMLTEST303B	Prepare working solutions	MSL973002A	Prepare working solution		IMP
PMLTEST402B	Prepare standardise and use solutions	MSL974001A	Prepare standardise and use solutions	IMP
PMLTEST404A	Perform chemical tests and procedures	MSL974003A	Perform chemical tests and procedures		IMP
PMLTEST406A	Perform physical tests	MSL974001A	Prepare standardise and use solutions	IMP
PMLTEST411A	Perform mechanical tests	MSL974010A	Perform mechanical tests		IMP
PMLSAMP302A	Receive and prepare samples for testing	MSL953001A	Receive and prepare samples for testing		IMP
PMLTEST300B	Perform basic tests	MSL973001A	Perform basic tests	IMP
PMLTEST307B	Prepare trial batches for evaluation	MSL973006A	Prepare trial batches for evaluation		IMP
PMLTEST511B	Supervise earthworks inspection, sampling and testing operations	MSL975007A	Supervise sampling, inspections and testing at construction sites		IMP

Mapping to Previous Version of the Training Package					
PMLTEST520A	Perform complex tests to measure engineering properties of materials	MSL975016A	Perform complex tests to measure engineering properties of materials		IMP
2.7 Emergency Response & Rescue – RIIERR					
PUASAR002B	Undertake road accident rescue	PUASAR024A	Undertake road crash rescue		IMP
PUASAR004B	Undertake vertical rescue	PUASAR032A	Undertake vertical rescue		IMP
PUASAR005B	Undertake confined space rescue	PUASAR025A	Undertake confined space rescue		IMP
PUASAR008B	Search as a member of a land search team	PUASAR027A	Search as a member of a land search team		IMP
RIIERR203A	Escape from hazardous situation unaided	RIERR203B	Escape from hazardous situation unaided		IMP
3. Technical Fields of Competence Applicable to Some Sectors (2 to 4 Sectors)					
3.3 Mobile Plant Operations – RIIMPO					
RIIMPO205A	Operate roller / compactor	RIIMPO205B	Operate roller / compactor		EQU
RIIMPO206A	Conduct bulk water truck operations	RIIMPO206B	Conduct bulk water truck operations		EQU
RIIMPO209A	Conduct underground load, haul, dump truck operations	RIIMPO333	Conduct underground load, haul and dump truck operations		EQU

Mapping to Previous Version of the Training Package					
RIIMPO301B	Conduct hydraulic excavator operations	RIIMPO301C	Conduct hydraulic excavator operations		EQU
RIIMPO307A	Conduct wheeled grader operations in underground mines	RIIMPO307B	Conduct wheeled grader operations in underground mines		EQU
RIIMPO310A	Conduct grader operations	RIIMPO310B	Conduct grader operations		EQU
RIIMPO320A	Conduct civil construction excavator operations	RIIMPO320B	Conduct civil construction excavator operations		EQU
3.4 Processing (General) – RIIPRO					
RIIPRO301B	Conduct crushing and screening operations	RIIPRO301C	Conduct crushing and screening operations		EQU
3.5 Plant and Equipment Operations – RIIPEO					
		RIIPEO302	Operate and monitor ore car dumpers		NEW
3.6 Conservation and Rehabilitation – RIICAR					
RTD2022A	Carry out natural restoration works	AHCNAR201A	Carry out natural area restoration works		IMP
RTD2202A	Conduct erosion and sediment control activities	AHCSAW201A	Conduct erosion and sediment control activities		IMP
RTD3032A	Implement	AHCSAW301A	Implement		IMP

Mapping to Previous Version of the Training Package				
	revegetation works		revegetation works	
RTD3205A	Construct conservation earthworks	AHCSAW301A	Construct conservation earthworks	IMP
3.8 Waste and By-products – RIIWBP				
RIIWBP203A	Monitor tailings dam environment	RIIWBP203B	Monitor tailings dam environment	EQU
3.11 Underground Mining – RIIUND				
RIIUND203A	Apply shot-crete	RIIUND203B	Apply shot-crete	EQU
4. Technical Fields of Competence Applicable to a Single Sector				
4.1.1 Civil Works Design				
RIICWD524A	Prepare design of sprayed seal surfacing	RIICWD524B	Prepare design of sprayed seal surfacing	EQU
RIICWD525A	Select pavement surfacing	RIICWD525B	Select pavement surfacing	EQU
4.1.2 Civil Works (Management and Supervision) – RIICWM				
RIICWM401A	Supervise civil works	RIICWM401B	Supervise civil works	
4.1.3 Civil Works (Common Units) – RIICCM				
FPICOT2221A	Trim and cross cut felled trees	FPICOT221B	Trim and cross cut felled trees	IMP
4.1.4 Road and Pavements Construction and Maintenance (General) – RIICRC				
		RIICRC311	Conduct concrete road paver operations	NEW
		RIICRC312	Setup and maintain	NEW

Mapping to Previous Version of the Training Package				
			concrete paver stringlines	
		RIICRC313	Conduct concrete road curing and texturing operations	NEW
		RIICRC314	Handle concrete materials	NEW
		RIICRC315	Use concreting materials and equipment	NEW
		RIICRC316	Place and compact concrete	NEW
		RIICRC317	Finish concrete pavements	NEW
		RIICRC318	Cure concrete	NEW
		RIICRC319	Saw and cut concrete pavements to initiate planned cracks	NEW
		RIICRC320	Seal concrete pavements	NEW
		RIICRC321	Use automated paving guidance systems	NEW
		RIICRC322	Receive, check and record concrete deliveries	NEW
		RIICRC323	Insert tie bars in fresh concrete	NEW

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Mapping to Previous Version of the Training Package				
RIICRC406a	Apply the principles of pavement maintenance	RIICRC406B	Apply the principles of pavement maintenance	EQU
4.1.5 Bituminous Surfacing – RIICBS				
RIICBS401A	Apply the principles of asphalt paving and compaction	RIICBS401B	Apply the principles of asphalt paving and compaction	EQU
RIICBS402A	Apply the principles for the application of bituminous sprayed treatment	RIICBS402B	Apply the principles for the application of bituminous sprayed treatment	EQU
RIICBS403A	Apply the principles for the polymer modified binder	RIICBS403B	Apply the principles for the polymer modified binder	EQU
RIICBS404A	Apply principles for the selection and use of bituminous emulsion	RIICBS404B	Apply principles for the selection and use of bituminous emulsion	EQU
4.2.6 Coal Mining (Diesel Engine Systems Maintenance) – RIIDES				
		RIIDES301	Inspect, test and maintain diesel engine systems and their ancillary systems	NEW
		RIIDES302	Inspect, test and maintain joints on diesel engine systems	NEW
		RIIDES303	Inspect, test and maintain	NEW

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Mapping to Previous Version of the Training Package				
			cooling systems on diesel engine systems	
		RIIDES304	Inspect, test and maintain inlet systems on diesel engine systems	NEW
		RIIDES305	Inspect, test and maintain exhaust systems on diesel engine systems	NEW
		RIIDES306	Inspect, test and maintain safety shutdown systems on diesel engine systems	NEW
		RIIDES307	Test, determine the cause and rectify excessive emission levels on diesel engine systems	NEW
4.3.3 Exploration and Field Work – RIIEGS				
RIIEGS305A	Navigate in remote and trackless areas	RIIEGS305B	Navigate in remote or trackless areas	EQU
		RIIVEH307A	Operate heavy rigid vehicle	NEW
4.3.4 Processing General – RIIPBP, RIIPGP, RIIPHA & RIIMPG				
FPPSTM1A	Manage steam boiler start-up	FPPSTM320A	Manage steam boiler startup	IMP
FPPSTM3A	Shut down and store steam	FPPSTM330A	Shut down and	IMP

Mapping to Previous Version of the Training Package				
	boiler		bank steam	
4.4.1 Drilling (General) – RIINHB				
RIINHB210A	Assist surface directional drilling	RIINHB210B	Assist surface directional drilling	EQU
RIINHB324A	Conduct grouting or cementing operations	RIINHB324B	Carry out grouting or cementing operations	EQU
4.4.2 Drilling (Oil & Gas) – RIIOGD, RIIOGF, RIIOGN				
RIIOGN301A	Prepare and operate drilling fluid systems	RIIOGD203A	Prepare and operate drilling fluid systems	EQU

Employability Skills

Employability skills are detailed in each qualification. Employability skills are to be demonstrated in the context of the conduct of the activities outlined in the units of competency being assessed.

Unit component	Example of embedded Employability Skill
Unit Title	RIIMEX201A Suppress dust in open cut environment
Unit Descriptor	This unit covers suppressing of dust in an open cut environment in the coal and metalliferous mining and extractive industries. It includes applying dust suppressant and minimising dust creation

Unit component	Example of embedded Employability Skill
Element	1) Apply dust suppressant
Performance Criteria	1.1 Access, interpret and apply compliance documentation relevant to suppressing of dust in an open cut environment 1.2 Receive, interpret and clarify shift changeover details 1.3 Select appropriate dust suppression method according to site conditions 1.4 Distribute dust suppressant in appropriate pattern according to road type 1.5 Adjust dust suppression activities according to schedule and weather conditions 1.6 Identify, address and report environmental issues 1.7 Communicate with other personnel using approved communication methods 1.8 Adhere to emergency procedures to ensure safety of personnel, plant and equipment
Range Statement	**Relevant compliance documentation** may include: • legislative, organisational and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • code of practice • Employment and Workplace Relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Required Skills and Knowledge	**Required Skills** Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to suppress dust in open cut environment: • apply legislative, organisation and site requirements and procedures • make decisions • direct and signal • clean equipment • maintain equipment

Unit component	Example of embedded Employability Skill
	• operate equipment • follow instructions • identify hazards • interpret plans, reports, maps, specifications • maintain records • follow safe work practices • troubleshoot • wear protective equipment **Required Knowledge** Specific knowledge is required to achieve the performance criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following as required to suppress dust in open cut environment: • emergency procedures • environmental aspects • equipment processes, technical capability and limitations • equipment safety requirements • geological and technical data (rock formation) • maintenance procedures • mine operation system • OHS procedures • plan terminology • site procedures (operational and maintenance) • site safety requirements • sprinkler operation • water truck operation
Evidence Guide	**Critical aspects for assessment and evidence required to demonstrate competency in this unit** The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following: • knowledge of the requirements, procedures and instructions for suppressing of dust in open cut environment

Unit component	Example of embedded Employability Skill
	• implementation of requirements, procedures and techniques for the safe, effective and efficient completion of the suppressing of dust in open cut environment • working with others to suppress dust in open cut environment that meets all of the required outcomes • consistent timely suppressing of dust in open cut environment that safely, effectively and efficiently meets the required outcomes

Qualifications Pathways

The following pathways charts are provided to show the types of pathways into and from qualifications that are possible with this Training Package.
For more information about qualifications and pathways contact SkillsDMC (Resources and Infrastructure Industry Skills Council) (http://www.skillsdmc.com.au).

Skill Sets in this Training Package

Definition
Skill sets are defined as single units of competency, or combinations of units of competency from an endorsed Training Package, which link to a licence or regulatory requirement, or defined industry need.
Wording on Statements of Attainment
Skill sets are a way of publicly identifying logical groupings of units of competency which meet an identified need or industry outcome. Skill sets are not qualifications.
Where skill sets are identified in a Training Package, the Statement of Attainment can set out the competencies a person has achieved in a way that is consistent and clear for employers and others. This is done by including the wording "these competencies meet [insert skill set title or identified industry area] need" on the Statement of Attainment. This wording applies only to skill sets that are formally identified as such in the endorsed Training Package. See the 2010 edition of the AQF Implementation Handbook for advice on wording on Statements of Attainment. http://www.aqf.edu.au/Portals/0/Documents/Handbook/AQF_Handbook_07.pdf

Skill Set Leading Hand
Skill Set Rouseabout Off Shore Oil and Gas
Skill Set Site Health and Safety Coordinator
Skill Set Mine Surveying
Skill Set Surface Shotfiring

| Skill Set Underground Shotfiring – Coal |
| Skill Set Underground Shotfiring – Metalliferous |
| Skill Set Supervision of Indigenous Employees |
| Skill Set Explosion Protected Diesel Engine Systems Maintenance |
| Skill Set Work Zone Traffic Control – Road Labourer |
| Skill Set Work Zone Traffic Control – Traffic Controller |
| Skill Set Work Zone Traffic Control – Implement Traffic Control Guidance Plan |
| Skill Set Work Zone Traffic Control – Supervisor |
| Skill Set Work Zone Traffic Control Guidance Plan – Developer |
| Skill Set Work Zone Traffic Control – Auditor / Inspector |
| Skill Set Surface Coal Mine Safety |
| Skill Set Underground Coal Mine Safety |

Summary of AQF Qualifications in this Training Package

Qualification Code	Title
RII10109	Certificate I in Resources and Infrastructure Operations
RII20109	Certificate II in Resources and Infrastructure Work Preparation
RII20209	Certificate II in Surface Extraction Operations
RII20309	Certificate II in Underground Coal Mining
RII20409	Certificate II in Underground Metalliferous Mining
RII20509	Certificate II in Resource Processing
RII20609	Certificate II in Mining/Field Exploration Operations
RII20712	Certificate II in Civil Construction
RII20809	Certificate II in Bituminous Surfacing

Qualification Code	Title
RII10109	Certificate I in Resources and Infrastructure Operations
RII20109	Certificate II in Resources and Infrastructure Work Preparation
RII20909	Certificate II in Drilling Operations
RII21009	Certificate II in Drilling Oil/Gas (Off shore)
RII21109	Certificate II in Drilling Oil/Gas (On shore)
RII30112	Certificate III in Surface Extraction Operations
RII30212	Certificate III in Underground Coal Operations
RII30311	Certificate III in Underground Metalliferous Mining
RII30411	Certificate III in Resource Processing
RII30509	Certificate III in Mining Exploration
RII30611	Certificate III in Small Mining Operations
RII30709	Certificate III in Mine Emergency Response and Rescue
RII30809	Certificate III in Civil Construction Plant Operations
RII30912	Certificate III in Civil Construction
RII31209	Certificate III in Civil Foundations
RII31609	Certificate III in Trenchless Technology
RII31809	Certificate III in Drilling Operations
RII31909	Certificate III in Drilling Oil/Gas (Off shore)
RII32009	Certificate III in Drilling Oil/Gas (On shore)
RII40109	Certificate IV in Surface Extraction Operations
RII40212	Certificate IV in Surface Coal Mining (Open Cut Examiner)
RII40311	Certificate IV in Metalliferous Mining Operations (Underground)
RII40412	Certificate IV in Underground Coal Operations

Qualification Code	Title
RII10109	Certificate I in Resources and Infrastructure Operations
RII20109	Certificate II in Resources and Infrastructure Work Preparation
RII40509	Certificate IV in Resource Processing
RII40609	Certificate IV in Civil Construction Operations
RII40712	Certificate IV in Civil Construction Supervision
RII40809	Certificate IV in Civil Construction Design
RII40909	Certificate IV in Drilling Operations
RII41009	Certificate IV in Drilling Oil/Gas (Off shore)
RII41109	Certificate IV in Drilling Oil/Gas (On shore)
RII50109	Diploma of Surface Operation Management
RII50209	Diploma of Underground Metalliferous Mining Management
RII50309	Diploma of Minerals Processing
RII50409	Diploma of Civil Construction Management
RII50509	Diploma of Civil Construction Design
RII50609	Diploma of Drilling Operations
RII50709	Diploma of Drilling Oil/Gas (Off shore)
RII50809	Diploma of Drilling Oil/Gas (On shore)
RII50912	Diploma of Underground Coal Mining Management
RII60109	Advanced Diploma of Metalliferous Mining
RII60209	Advanced Diploma of Extractive Industries Management
RII60312	Advanced Diploma of Underground Coal Mining Management
RII60409	Advanced Diploma of Drilling Management
RII60509	Advanced Diploma of Civil Construction Design

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Qualification Code	Title
RII10109	Certificate I in Resources and Infrastructure Operations
RII20109	Certificate II in Resources and Infrastructure Work Preparation
RII60609	Advanced Diploma of Civil Construction
RII60709	Advanced Diploma of Surface Coal Mining Management

Overview

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 peoples 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
• encourages learning and assessment in a work-related environment which leads to verifiable workplace outcomes.
How do Training Packages fit within the National Skills Framework?
The National Skills Framework applies nationally, is endorsed by the Ministerial Council for Vocational and Technical Education, and comprises the Australian Quality Training Framework 2010 (AQTF 2010), and Training Packages endorsed by the National Quality Council (NQC).
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 2010.

Training Package Components
Training Packages are made up of mandatory components endorsed by the NQC, 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 AQTF 2010. 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.

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 NQC, 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 code always before the title**.

Training Package Codes

Each Training Package has a unique five-character national code assigned when the Training Package is endorsed, for example RII09. 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 RII10109. Qualification codes are developed as follows:

• the first three letters identify the Training Package;
• the first number identifies the qualification level (noting that, in the qualification titles themselves, arabic numbers are **not** used);
• 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. 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. Unit codes are developed as follows:

• a typical code is made up of 12 characters, normally a mixture of uppercase letters and numbers, as in RIIBEF202A;
• the first three characters signify the Training Package - RII09 - in the above example 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. An "A" at the end of the code indicates that this is the original unit of competency. "B", or another incremented version identifier 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; and
• 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 Packages broad industry coverage.

Qualification Titles

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

•   first, the qualification is identified as either Certificate I, Certificate II, Certificate III, Certificate IV, Diploma, Advanced Diploma, Vocational Graduate Certificate, or Vocational Graduate Diploma;

•   this is followed by the words "in" for Certificates I to IV, and "of" for Diploma, Advanced Diploma, Vocational Graduate Certificate and Vocational Graduate Diploma;

•   then, the industry descriptor, for example Telecommunications; and

•   then, if applicable, the occupational or functional stream in brackets, for example (Computer Systems).

For example:

•   RII10109 Certificate I in   Resources and Infrastructure Operations

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:

•   RIIBEF201B Plan and organise work

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.
http://www.aqf.edu.au/Portals/0/Documents/Handbook/AQF_Handbook_07.pdf 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 eight AQF qualifications.
• Certificate I in ...
• Certificate II in ...
• Certificate III in ...
• Certificate IV in ...
• Diploma of ...
• Advanced Diploma of ...
• Vocational Graduate Certificate of ...
• Vocational Graduate 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 AQTF 2010 *Essential Standards for Initial and Continuing Registration.*

Statement of Attainment
A Statement of Attainment is issued by a Registered Training Organisation when an individual has completed one or more units of competency from nationally recognised qualification(s)/courses(s). Issuance of Statements of Attainment must comply with the advice provided in the current *AQF Implementation Handbook* and the AQTF 2010 *Essential Standards for Initial and Continuing Registration.*
Under the AQTF 2010, RTOs must recognise the achievement of competencies as recorded on a qualification testamur 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
- 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;
- 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

SkillsDMC

- take responsibility for own outputs in work and learning
- 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
- 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 judgment 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
- 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

• demonstrate accountability for personal and group outcomes within broad parameters.

Vocational Graduate Certificate

Characteristics of competencies or learning outcomes

• The self-directed development and achievement of broad and specialised areas of knowledge and skills, building on prior knowledge and skills.

• Substantial breadth and complexity involving the initiation, analysis, design, planning, execution and evaluation of technical and management functions in highly varied and highly specialised contexts.

• Applications involve making significant, high-level, independent judgements in major broad or planning, design, operational, technical and management functions in highly varied and specialised contexts. They may include responsibility and broad-ranging accountability for the structure, management and output of the work or functions of others.

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

Distinguishing features of learning outcomes

• Demonstrate the self-directed development and achievement of broad and specialised areas of knowledge and skills, building on prior knowledge and skills.

• Initiate, analyse, design, plan, execute and evaluate major broad or technical and management functions in highly varied and highly specialised contexts.

• Generate and evaluate 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 in complex contexts.

• Demonstrate responsibility and broad-ranging accountability for the structure, management and output of the work or functions of others.

Vocational Graduate Diploma

Characteristics of competencies or learning outcomes

• The self-directed development and achievement of broad and specialised areas of knowledge and skills, building on prior knowledge and skills.

• Substantial breadth, depth and complexity involving the initiation, analysis, design, planning, execution and evaluation of major functions, both broad and highly specialised, in highly varied and highly specialised contexts.

• Further specialisation within a systematic and coherent body of knowledge.

• Applications involve making high-level, fully independent, complex judgements in broad planning, design, operational, technical and management functions in highly varied and highly specialised contexts. They may include full responsibility and accountability for all aspects of work and functions of others, including planning, budgeting and strategy development.

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

Distinguishing features of learning outcomes

• Demonstrate the self-directed development and achievement of broad and highly specialised areas of knowledge and skills, building on prior knowledge and skills.

• Initiate, analyse, design, plan, execute and evaluate major functions, both broad and within highly varied and highly specialised contexts.

• Generate and evaluate complex ideas through the analysis of information and concepts at an abstract level.

• Demonstrate an expert command of wide-ranging, highly specialised, technical, creative or conceptual skills in complex and highly specialised or varied contexts.

• Demonstrate full responsibility and accountability for personal outputs.

• Demonstrate full responsibility and accountability for all aspects of the work or functions of others, including planning, budgeting and strategy.

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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) Essential Standards for Initial and Continuing Registration*. 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.

Quality assessment underpins the credibility of the vocational education and training sector. The Assessment Guidelines of a Training Package are an important tool in supporting quality assessment.

Assessment within the National Skills 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.

Assessment must be carried out in accordance with the:

- benchmarks for assessment
- specific industry requirements
- principles of assessment
- rules of evidence
- assessment requirements set out in the AQTF

Benchmarks for Assessment

The endorsed units of competency in this Training Package 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).

Principles of Assessment

All assessments carried out by RTOs are required to demonstrate compliance with the principles of assessment:

- Validity
- Reliability
- Flexibility
- Fairness
- Sufficiency

These principles must be addressed in the:
Design, establishment and management of the assessment system for this training package
Development of assessment tools,
And the conduct of assessment

Validity

Assessment is valid when the process is sound and assesses what it claims to assess. Validity requires that:

(a)	assessment against the units of competency must cover the broad range of skills and knowledge that are essential to competent performance
(b)	assessment of knowledge and skills must be integrated with their practical application
(c)	judgement of competence must be based on sufficient evidence (that is, evidence gathered on a number of occasions and in a range of contexts using different assessment methods). The specific evidence requirements of each unit of competency provide advice on sufficiency

Reliability

Reliability refers to the degree to which evidence presented for assessment is consistently interpreted and results in consistent assessment outcomes. Reliability requires the assessor to have the required competencies in assessment and relevant vocational competencies (or to assess in conjunction with someone who has the vocational competencies). It can only be achieved when assessors share a common interpretation of the assessment requirements of the unit(s) being assessed.

Flexibility

To be flexible, assessment should reflect the candidate"s needs; provide for recognition of competencies no matter how, where or when they have been acquired; draw on a range of methods appropriate to the context, competency and the candidate; and support continuous competency development.

Fairness

Fairness in assessment requires consideration of the individual candidate"s needs and characteristics, and any reasonable adjustments that need to be applied to take account of them. It requires clear communication between the assessor and the candidate to ensure that the candidate is fully informed about, understands and is able to participate in, the assessment process, and agrees that the process is appropriate. It also includes an opportunity for the person being assessed to challenge the result of the assessment and to be reassessed if necessary.

Sufficiency

Sufficiency relates to the quality and quantity of evidence assessed. It requires collection of enough appropriate evidence to ensure that all aspects of competency have been satisfied and that competency can be demonstrated repeatedly. Supplementary sources of evidence may be necessary. The specific evidence requirements of each unit of competency provide advice on sufficiency. Sufficiency is also one of the rules of evidence.

Rules of Evidence

The rules of evidence guide the collection of evidence that address the principles of validity and reliability, guiding the collection of evidence to ensure that it is valid, sufficient, current and authentic.

Valid

Valid evidence must relate directly to the requirements of the unit of competency. In ensuring evidence is valid, assessors must ensure that the evidence collected supports demonstration of the outcomes and performance requirements of the unit of competency together with the knowledge and skills necessary for competent performance. Valid evidence must encapsulate the breadth and depth of the unit of competency, which will necessitate using a number of different assessment methods.

Sufficient

Sufficiency relates to the quality and quantity of evidence assessed. It requires collection of enough appropriate evidence to ensure that all aspects of competency have been satisfied and that competency can be demonstrated repeatedly. Supplementary sources of evidence may be necessary. The specific evidence requirements of each unit of competency provide advice on sufficiency.

Current

In assessment, currency relates to the age of the evidence presented by a candidate to demonstrate that they are still competent. Competency requires demonstration of current performance, so the evidence collected must be from either the present or the very recent past.

Authentic

To accept evidence as authentic, an assessor must be assured that the evidence presented for assessment is the candidate"s own work.

Assessment Requirements of the Australian Quality Training Framework

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 AQTF 2010 *Essential Standards for Registration.*

The AQTF 2010 *Essential Standards for Initial and Continuing Registration* can be downloaded from <www.training.com.au>.

The following points summarise the assessment requirements.

Registration of Training Organisations

Assessment must be conducted by, or on behalf of, an RTO formally registered by a State or Territory Registering Body in accordance with the AQTF The RTO must have the specific units of competency and/or AQF qualifications on its scope of registration.

Quality Training and Assessment

Each RTO must provide quality training and assessment across all its operations. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*, Standard 1.

Assessor Competency Requirements

Each person involved in training, assessment or client service must be competent for the functions they perform. AQTF 2010 *Essential Standards for Initial and Continuing Registration*, Standard 1 for assessor (and trainer) competency requirements. See also the AQTF 2010 *Users" Guide to the Essential Standards for Registration* Appendix 2.

Assessment Requirements

The RTOs assessments, including RPL, must meet the requirements of the relevant endorsed Training Package. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

Assessment Strategies

Each RTO must have strategies for training and assessment that meet the requirements of the relevant Training Package or accredited course and are developed in consultation with industry stakeholders. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

National Recognition

Each RTO must recognise the AQF qualifications and Statements of Attainment issued by any other RTO. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

Access and Equity and Client Outcomes

Each RTO must adhere to the principles of access and equity and maximise outcomes for its clients. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

Monitoring Assessments

Training and/or assessment provided on behalf of the RTO must be monitored to ensure that it is in accordance with all aspects of the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

Recording Assessment Outcomes

Each RTO must manage records to ensure their accuracy and integrity. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

Issuing AQF Qualifications and Statements of Attainment

Each RTO must issue AQF qualifications and Statements of Attainment that meet the requirements of the current 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 when an individual has completed one or more units of competency from nationally recognised qualification(s)/courses(s). See the AQTF and the edition of the AQF Implementation Handbook-available on the AQF Council website < www.aqf.edu.au>.

Advice on occupational and licensing requirements or assessment specific to the units of competency and qualifications being submitted for endorsement

This section provides information on licensing/registration requirements for this training package, with the following important disclaimer.

Licensing and registration requirements that apply to the resources and infrastructure industry and other specific industries, and vocational education and training, vary between each state and territory, and can regularly change. The developers of this training package, and DEEWR, consider that the licensing/registration requirements described in this section apply to RTOs, assessors or candidates with respect to this training package.

While reasonable care has been taken in its preparation, the developers of this training package and DEEWR cannot guarantee that the list is definitive or accurate at the time of reading; the information in this section is provided in good faith on that basis.

Contact the relevant state or territory department(s) to check if the licensing/registration requirements described below still apply, and to check if there are any others with which you must comply. For further information contact:

Australian Capital Territory (ACT)	WorkCover/WorkSafe ACT
www.ors.act.gov.au/WorkCover/WebPages/WorkSafe/ohs.htm	
New South Wales (NSW)	WorkCover New South Wales
www.workcover.nsw.gov.au	
Northern Territory (NT)	NT WorkSafe
www.worksafe.nt.gov.au/	

Queensland (QLD)   Fair and Safe Work

http://www.justice.qld.gov.au/

South Australia (SA)   SafeWork SA

www.safework.sa.gov.au

Tasmania (TAS)   Workplace Standards
                                                        Tasmania
www.wst.tas.gov.au

Victoria (VIC)   WorkSafe Victoria

www.worksafe.vic.gov.au

Western Australia (WA)   Department of Commerce
                                                        (Worksafe Division)
http://www.commerce.wa.gov.au/WorkSafe/

National   Safe Work Australia

http://safeworkaustralia.gov.au/

Requirements for Assessors

In order to conduct assessment for statutory licensing or other industry registration requirements, assessors must meet the requirements as determined by the regulator for the activity, in addition to the AQTF requirements.

The regulator will be the state/territory based SafeWork Australia representative body, unless otherwise indicated.

The following chart provides details of:

- the regulator across jurisdictions
- the regulated activity and jurisdiction/s in which regulations apply
-

License/Registration	Jurisdiction	Contact
	ACT	WorkCover/WorkSafe ACT www.ors.act.gov.au/WorkCover/WebPages /WorkSafe/ohs.htm
	NSW	WorkCover New South Wales www.workcover.nsw.gov.au
	NT	NT WorkSafe www.worksafe.nt.gov.au/

	QLD	Fair and Safe Work http://www.justice.qld.gov.au/
	SA	SafeWork SA www.safework.sa.gov.au
	TAS	Workplace Standards Tasmania www.wst.tas.gov.au
	VIC	WorkSafe Victoria www.worksafe.vic.gov.au
	WA	Department of Commerce (Worksafe Division) http://www.commerce.wa.gov.au/WorkSafe /

Plant Operation		
Boom Type Elevating Work Platform (boom length 11m or more)	ACT, NSW, QLD, SA, TAS, VIC, WA	
Forklift Truck	ACT, NSW, QLD, SA, TAS, VIC, WA	
Front End Loader	ACT, NSW, QLD, SA	
Front End Loader/Backhoe	ACT, NSW, QLD, SA, TAS, VIC, WA	
Front End Loader (Skid Steer type)	ACT, NSW, QLD, SA, TAS, VIC, WA	
Excavator	ACT, NSW, QLD, SA, TAS, VIC, WA	
Order Picking Forklift Truck	ACT, NSW	
Dragline Operation	ACT, SA	
Dozer	QLD, SA	
Grader	QLD	
Industrial Truck (Forklift) Operation	NT	
Roller	QLD	
Scraper	QLD	
Telescopic Handler Requirement will be determined by the	SA	

attachment fitted to the telescopic handler and whether it is a slewing or non-slewing machine		
Tilt Top Construction Crane Operation	WA	
Tower Crane Operation	NT, QLD, SA, TAS, VIC, WA	
Derrick Crane Operation	NT, QLD, SA, TAS, VIC, WA	
Portal Boom Crane Operation	NT, QLD, SA, TAS, VIC, WA	
Bridge and Gantry Crane Operation	NT, QLD, SA, TAS, VIC, WA	
Vehicle Loading Crane Operation	NT, QLD, SA, TAS, VIC, WA	
Non-slewing Mobile Crane Operation	NT, QLD, SA, TAS, VIC, WA	
Slewing Mobile Crane Operation (up to 20 tonne)	NT, QLD, SA, TAS, VIC, WA	
Slewing Mobile Crane Operation (up to 60 tonne)	NT, QLD, SA, TAS, VIC, WA	
Slewing Mobile Crane Operation (up to 100 tonne)	NT, QLD, SA, TAS, VIC, WA	
Slewing Mobile Crane Operation (Open)	NT, QLD, SA, TAS, VIC, WA	

Hoist Operation(Cantilever Platform)	NSW, NT, TAS, VIC	
Hoist Operation (Personnel and Materials)	SA, NSW, NT, TAS, VIC	
Concrete Placing Boom Operation	NSW, NT, TAS, WA	
Self Erecting Tower Crane	QLD, TAS, VIC	
Rigging and Scaffolding		
Basic Scaffolding	NT, QLD, SA, TAS, VIC, WA	
Intermediate Scaffolding	NT, QLD, SA, TAS, VIC, WA	
Advanced Scaffolding	NT, QLD, SA, TAS, VIC, WA	
Dogging	NT, QLD, SA, TAS, VIC, WA	
Basic Rigging	NT, QLD, SA, TAS, VIC, WA	
Intermediate Rigging	NT, QLD, SA, TAS, VIC, WA	
Advanced Rigging	NT, QLD, SA, TAS, VIC, WA	
Pressure Systems		
Basic Boiler Operation	NT, WA, TAS, VIC	

Intermediate Boiler Operation	NT, WA, TAS, VIC	
Advanced Boiler Operation	NT, WA, TAS, VIC	
Turbine Operation	NT, WA, TAS, VIC	
Reciprocating Steam Engine Operation	NT, WA, TAS, VIC	
Shotfiring and Blasting		
	ACT	WorkCover/WorkSafe ACT www.ors.act.gov.au/WorkCover/WebPages /WorkSafe/ohs.htm
	NSW	Department of Minerals and Petroleum www.minerals.nsw.gov.au
	NT	NT Worksafe www.worksafe.nt.gov.au
	QLD	Department of Mines and Energy www.dme.qld.gov.au
	SA	SafeWork SA www.safework.sa.gov.au
	TAS	Workplace Standards Tasmania www.wst.tas.gov.au
	VIC	Department of Primary Industries (Earth Resources Development Division) http://new.dpi.vic.gov.au/earth-resources
	WA	Department of Mines and Petroleum http://www.dmp.wa.gov.au/

Shotfirer	ACT, NSW, NT. QLD, SA, TAS, WA	
Blaster	ACT, NSW, NT. QLD, SA, TAS, WA	
Agricultural/Seismic/ Small Scale Blasting	QLD	
Quarrying/Opencut Mining/Construction	QLD	
Tunnelling and Underground Mining	QLD	
A Licence to Use (for Oil Wells)	QLD	
Drivers licence requirement as per vehicle in use		
	ACT	Road Transport Authority http://www.rego.act.gov.au/
	NSW	Road and Traffic Authority NSW www.rta.nsw.gov.au
	NT	Northern Territory Transport Group http://www.nt.gov.au/transport/
	QLD	Queensland Transport www.transport.qld.gov.au
	SA	Transport SA www.transport.sa.gov.au
	TAS	Department of Infrastructure Energy and Resources www.transport.tas.gov.au/licence_information
	VIC	VicRoads www.vicroads.vic.gov.au
	WA	Department of Transport

		www.dpi.wa.gov.au/licensing	
Explosives Driver (only applicable for drivers for a prime contractor who hold an explosive transport licence)	WA	Department of Mines and Petroleum http://www.dmp.wa.gov.au/	
Carry Explosives		SafeWork SA http://www.safework.sa.gov.au/	
High Risk Work			
A License to Perform High Risk Work	TAS	Workplace Standards Tasmania www.wst.tas.gov.au	
High Risk Work (HRW)	WA	Department of Commerce (Worksafe Division) http://www.commerce.wa.gov.au/WorkSafe/	
Confined Space Entry	National	Refer Plant Operation for state Contacts	
Asbestos Removalist	National	Refer Plant Operation for state Contacts	
Elevating Work Platform Operation	National	Refer Plant Operation for state Contacts	
Traffic Management			
	SA	Transport SA www.transport.sa.gov.au	
	TAS	Department of Infrastructure, Energy and Resources www.dier.tas.gov.au	
	WA	Main Roads WA http://www.mainroads.wa.gov.au/Pages/Welcome.aspx	

Traffic Management	TAS, SA	
Basic Traffic Controller	WA	
Advanced Traffic Controller	WA	
Workzone Traffic Management	SA	
Basic Worksite Traffic Management	WA	
Worksite Traffic Management	WA	
Advanced Worksite Traffic Management	WA	
Traffic Controller	WA	
Sector specific – Mining		
Open Cut Examiners	QLD	Department of Mines and Energy www.dme.qld.gov.au
Deputy's Certificate of Competency (also known as Mine Deputies or ERZ Controller)	QLD	
Second Class Mine Manager's Certificate of Competency (Underground Coal Mine)	QLD	
First Class Mine Manager's Certificate of Competency (Underground Coal Mine)	QLD	
First Class Mine Manager's Certificate of Competency	QLD	

(Underground Metalliferous Mines)		
Quarrying/Opencut Mining/Construction	QLD	
Tunnelling and Underground Mining	QLD	
A Licence to Use (for Oil Wells)	QLD	
SRS Licence (Security Risk Substances)	WA	Dangerous Goods Safety (Security Risk Substances) Regulations 2007 for risk substances http://www.austlii.edu.au/au/legis/wa/consol_reg/dgsrsr2007628/
National Police Check	WA	Required for SRS Licence http://www.police.wa.gov.au/Ourservices/Policecheckscertificates/NationalPoliceCertificates/tabid/1339/Default.aspx
Sector specific – Civil Construction		
Green Card	SA, NSW	CITB www.citb.org.au
White Card	SA, WA, NSW	SafeWork SA www.transport.sa.gov.au also Blue Card QLD only and Red Card WA only
Sector specific – Drilling		
National Water Well Drillers' Licence	National	Australian Drilling Industry Training Committee (Examining Body) http://www.aditc.com.au/
	NSW	Office of Water http://www.water.nsw.gov.au/Water-licensing/About-licences/Driller-s-licences/Driller-s-licences/default.aspx
	NT	Department of Natural Resources, the Arts and Sport

		www.nreta.nt.gov.au
	QLD	Department of Environment and Resource Management: http://www.derm.qld.gov.au/
	SA	Department for Water http://www.waterforgood.sa.gov.au/
	TAS	Department of Primary Industries, Parks, Water and Environment http://www.dpiw.tas.gov.au/
	Vic	Department of Sustainability and Environment www.dse.vic.gov.au
	WA	Australian Drilling Industry Association www.adia.com.au
Petroleum and Gas Drilling	QLD	Department of Employment and Economic Development and Innovation (DEEDI) Mining and Safety www.mines.industry.qld.gov.au

- These requirements may be met through a range of methods. Further information is available through the contacts provided for each State and Territory.

- The High Risk units which result in the related OHS licence are following units

CPCCLBM3001A	License to operate a concrete placing boom
CPCCLDG3001A	License to perform dogging
CPCCLH3001A	License to operate a personnel and materials hoist
CPCCLHS3002A	License to operate a materials hoist
CPCCLRG3001A	License to perform rigging – basic level
CPCCLRG3002A	License to perform rigging – intermediate level
CPCCLRG4001A	License to perform rigging – advanced level
CPCCLSF2001A	License to erect, alter and dismantle scaffolding – basic level

CPCCLSF3001A	License to erect, alter and dismantle scaffolding – intermediate level
CPCCLSF4001A	License to erect, alter and dismantle scaffolding – advanced level
CPCCLTC4001A	License to operate a tower crane
CPCCLTC4002A	License to operate a self-erecting tower crane
TLILIC1208A	Licence to operate a vehicle loading crane (capacity ten metre tonnes and above)
TLILIC408A	Licence to operate a derrick crane
TLILIC708A	Licence to operate a portal boom crane
TLILIC808A	Licence to operate a slewing mobile crane (up to 20 tonnes)
TLILIC908A	Licence to operate a slewing mobile crane (up to 60 tonnes)
TLILIC1008A	Licence to operate a slewing mobile crane (up to 100 tonnes)
TLILIC1108A	Licence to operate a slewing mobile crane (over 100 tonnes)
TLILIC308A	Licence to operate a bridge and gantry crane
TLILIC608A	Licence to operate a non-slewing mobile crane (greater than 3 tonnes capacity)
TLILIC508A	Licence to operate a boom type elevating work platform (boom length 11 metres or more)
TLILIC108A	Licence to operate a forklift truck
TLILIC208A	Licence to operate an order picking forklift truck

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- These requirements may be met through a range of methods. Further information is available through the contacts provided for each state and territory.
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- The High Risk units which have been imported to the RII09 Resources and Infrastructure Industry training package are as follows:
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CPCCLDG3001A	License to perform dogging
CPCCLRG3001A	License to perform rigging basic level
CPCCLSF2001A	License to erect, alter and dismantle scaffolding basic level

The RII09 training package contains industry units of competency that relate to High Risk Work licence units of competency. The industry units are not intended to replace the High Risk units but to provide industry with a competency recognition framework for a) application of the licensed activity in the work environment and / or b) conduct of the activity when the definitions for the application of the National Standard for High Risk Work do not apply. RTOs must establish whether the activity being undertaken requires completion of the High Risk Work licence units and ensure that this requirement is met. This may be achieved through: co-assessment of the unit of competency with/by a registered assessor; gap training for a person already holding the High Risk Work Unit of Competency.

Qualification packaging rules do not include all of the High Risk Work licence units of competency that relate to the RII units of competency. Industry requires that the licence requirement be met through:

- holistic assessment of the RII and High Risk Work unit of competency (ensuring assessor and assessment requirements for both units are met)
- using the import option for the High Risk Work unit of competency
- credit transfer for the High Risk Work unit of competency (if applicable)

The table below details the affected RII units of competency and related High Risk Work Licence units of competency

Construction and property services training package

Unit code	Unit title	Unit code	Unit title
CPCCLDG3001A	Licence to perform dogging	RIIHAN208A	Perform dogging
CPCCLHS3001A	Licence to operate a personnel and materials hoist	RIIMPO207A	Operate a personnel and materials hoist
CPCCLRG3001A	Licence to perform rigging basic level	RIIHAN209A	Perform basic rigging
CPCCLRG3002A	Licence to perform rigging intermediate level	RIIHAN210A	Perform intermediate rigging
CPCCLSF2001A	Licence to erect, alter and dismantle scaffolding basic level	RIIHAN211A	Conduct basic scaffolding operations
CPCCLSF3001A	Licence to erect, later and dismantle scaffolding intermediate level	RIIHAN302A	Conduct intermediate scaffolding operations

Transport and Logistics training package

Unit code	Unit title	Unit code	Unit title

TLILIC108A	Licence to operate a forklift truck	RIIHAN201A	Operate a forklift
TLILIC308A	Licence to operate a bridge and gantry crane	RIIHAN305A	Operate a gantry or overhead crane
TLILIC508A	Licence to operate a boom-type elevating work platform (boom length 11 metres or more)	RIIHAN301A	Operating elevating work platform
TLILIC608A	Licence to operate a non-slewing mobile crane (greater than 3 tonnes capacity)	RIIHAN212A	Conduct non-slewing crane operations
TLILIC808A	Licence to operate a slewing mobile crane (up to 20 tonnes)	RIIHAN304A	Conduct slewing crane operations
TLILIC1208 A	Licence to operate a vehicle loading crane (capacity 10 metre tonnes and above)	RIIHAN307A	Operate a vehicle loading crane

The Mining Regulations vary from State to State. While some of the qualifications and units of competency are associated with statutory positions, none of the qualifications result in a Statutory Ticket – this is issued by the State Mining Regulator. All participants/employees are advised to check with their employer and regulator in their State/Territory.

Further Information on Requirements for Assessors

In addition to the National Skills Standards Council's Training and Assessment Competencies to be held by trainers and assessors (as noted in the *AQTF Essential Standards for Registration*) it is industry's preferred approach that assessors are compliant with the following requirements:

- demonstrate current knowledge and experience of the industry, industry practices, and the job or role against which performance is being assessed. This may be demonstrated through evidence of actual workplace experience within the last two years or one or more of the following:
- attendance at professional development/training and education activities focusing on good practice in the relevant industry competencies
- participation in professional/industry networks
- demonstrate current knowledge and skill in assessing against this training package in a range of contexts. This may be demonstrated through at least one of the following:
- familiarity with the units of competency in this training package to be used by the learner as a basis of assessment
- recent planning, conduct and review of assessment and/or workplace training activities in a relevant industry context
- participation in moderation/validation processes

- attendance at professional development activities focused on assessment and/or workplace training
- demonstrate the necessary interpersonal and communication skills required in the assessment process. This may be demonstrated through evidence of one or more of the following:
- attendance at professional development and/or training activities focused on effective communication in assessment and/or workplace training contexts
- knowledge of language, literacy and numeracy issues in the context of assessment and workplace training
- recent assessment and/or workplace training activities

This training package provides a range of options for meeting the assessor requirements. Assessments in the Resources and Infrastructure industries can be undertaken in a variety of contexts by individual assessors, partnerships involving assessors and technical experts, and teams of assessors.

All RTOs must consult with responsible industry personnel to determine the appropriateness of the assessor for on-the-job assessments at a worksite. This is particularly important for mining sites. 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, e.g. shotfirer. In such instances, the RTO must clarify the specific criteria as this requirement may vary between states and/or territories depending on legislative requirements. (Refer to Requirements for Assessors). The case studies provided show how the requirement to use qualified assessors can be met.

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 Resources and Infrastructure enterprises have formed with RTOs.

Case study 1 — Partnership to deliver training and assessment
A mine site developed a partnership arrangement with an RTO where the RTO provides off-the-job training and assessment and the enterprise will provide on-the-job training and workplace evidence that support an employee's achievement of units of competency.   In this arrangement the enterprise trainer does not conduct assessment but may provide testimonials documenting first hand observation.

The RTO established that the workplace trainer is suitably qualified and together the roles and responsibilities of each party are established. The RTO ensures that the enterprise understands their requirement to conduct moderation, validation and other checks to ensure quality requirements are met.

The RTO trainer/assessor and the enterprise trainer identify the required units of competency and agree on the assessment tools and processes 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 the selected units of competency.

The enterprise provides on-the-job training and the workplace supervisor/coach or trainer assists 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 competency and eligibility for a Statement of Attainment or Certificate level qualification. Where necessary, the RTO assessor may require additional evidence or conduct direct assessment to ensure competence has been demonstrated.

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 are also documented.

The RTO works 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. Joint validation and moderation is carried out with the workplace assessor and a procedure for validating the assessment strategies and tools is agreed and documented. The RTO visits the mine and validates the assessment process, strategies and tools and recommends any action for improvement.

The mine completes all training and assessments using the agreed assessment strategies and tools and informed the RTO of the outcomes. The RTO awards 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.

Case study 4 — An individual assessor conducts the assessment
A mining company has entered into an agreement with an 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.
he company selects an RTO with the appropriate qualification on its scope of registration. The RTO assessor satisfies the training package requirements and guidelines for the relevant assessor competencies. However the assessor does not possess 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 has 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. In this arrangement the workplace supervisor does not conduct assessment but may provide testimonials documenting first hand observation. The RTO ensures a process is in place to confirm the impartiality of the supervisor.

The workplace supervisors/team leaders do not hold national assessor competencies in operations but are deemed competent by the RTO, which also has scope for the assessor competencies. . The RTO is also negotiating with the mining company for the 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.   The RTO undertakes the review, validation and moderation of evidence and has responsibility for ensuring the evidence provided is satisfactory.

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 has mapped the enterprise specific work activities and outcomes for team leaders against the national competency standards for the Certificate IV Extractive Industries 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 and team leaders.

The enterprise has found advantages in that linking the training and assessment to the worksite 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 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 some time 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 that disrupted the work routine.

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

The assessment design will be required to incorporate features which will ensure adequate evidence is gathered for each of the components identified below:

Underpinning knowledge

It will be difficult, and often impossible, to gather sufficient evidence of the required essential knowledge by means of direct observation alone. It will be necessary to include some form of questioning, which may, or may not, be concurrent with direct observation. Questioning should not rely on written communication to any greater degree than is otherwise required by the unit of competency. The use of diagrams and sketching, demonstration and description along with third party evidence should be allowable within the assessment of essential knowledge.

Routine skills

Sufficient evidence of competent performance of routine skills may be obtained by direct observation. However, observation on more than one occasion would be required if direct observation is the sole evidence gathering method used as the observation needs to include performance of the skills under a range of all normal and some abnormal conditions. As multiple direct observations are often impractical, other evidence gathering tools (such as supervisor and other third party reports) should be included to gather evidence of consistent performance under a range of conditions. The emphasis is on evidence of competent performance rather than on direct observation, and this may come from drill logs, work colleagues and other sources.

Refer to contacts or skillsdmc@skillsdmc.com.au for detail of industry assessment tools which may be used either directly or as models to develop customised tools. Workplaces or RTOs may also wish to develop their own specific assessment tools to complement the national tools or as an alternative to the national tools.

Non-routine skills

By their nature the non-routine skills are unlikely to be able to be assessed adequately by direct observation. These skills include problem solving and emergency response and it would be inappropriate to set up a situation, or to wait for a situation to occur, which would allow for direct observation.

In most cases, the use of third party evidence, such as from supervisors and other work colleagues will be the most practical form of evidence for non-routine skills. This implies that a person will not be deemed competent in these non-routine skills until they have had a range of experience which will allow them to have accumulated evidence of their ability to handle non-routine situations.

In some situations, such as emergency response, some appropriate form of simulation (e.g. a fire drill) may be the best form of gathering sufficient, appropriate evidence of competence. Case studies may be appropriate in some circumstances to increase the evidence available. Simulation/case studies may also be used for safety and cost effectiveness reasons.

Where the appropriate choice between these is restricted, this will be stated in the unit of competency. Generally, where:

- physical skills are significant (e.g. emergency procedures), then a simulation may be the preferred method (this may require coordination with a regular 'safety drill')
- cognitive skills are significant (e.g. problem solving) then a case study may be the preferred method

It is recommended that at least two different methods of gathering evidence be used in any assessment. Methods of gathering evidence for an assessment may include:

- direct observation
- demonstration on the job
- third party reports e.g. peer/team leader/3600 review
- questioning – written, verbal
- workplace documents – logs, reports etc
- scenarios/case studies
- projects
- simulation, routine drills
- interview

The ability to demonstrate performance at the level of a unit of competency as a whole is the key criteria in any assessment process.

Requirements for Candidates

Individuals being assessed under statutory licensing and industry registration systems must comply with training and experience requirements additional to the minimum requirements identified in this Training Package.

Requirements for RTOs

Resources and Infrastructure industry members have identified their expectations in relation to the roles and responsibilities of RTOs delivering and assessing against the units of competency and the qualifications in this package. The RTOs are expected to:

- ensure the quality of the delivery and assessment
- ensure trainers have relevant industry experience and maintain industry currency
- ensure these assessment guidelines are used as the basis for assessing against the units of competency and qualifications in this training package
- provide comprehensive and accessible advice to employers and learners on their responsibilities and rights
- ensure assessors have the appropriate qualifications and experience as set out in these assessment guidelines
- ensure appropriate processes for industry involvement in consultation and validation of assessment

In addition to requirements specified in the *Essential Standards for Registration*, units of competency from the Resources and Infrastructure training package should, wherever possible, be assessed in a work environment. Where this is not possible, assessment may occur in a simulated environment. A simulated environment must duplicate the conditions of the work environment and satisfy the assessment requirements as stated in the Evidence guide of the unit of competency.

A simulated work environment may be required for the following reasons:

- the workplace may not use the relevant skill, equipment or process
- conducting assessments may be disruptive or interfere with work requirements, for example, there may be ethical, privacy or confidentiality issues to consider
- it may not be appropriate to apply the skills in the workplace due to potential risks such as those to health and safety or equipment being damaged

In order to be a valid and reliable venue from which to assess a competency, the simulation must duplicate the conditions of a real work environment; the range of activities that occur must reflect real work experience.

When a simulated work environment is being set up, it is crucial that the assessor is thoroughly familiar with the competency standard being assessed, as well as experienced in the current circumstances of the work. The RTO/assessor must ensure that the assessment environment includes:

- use of the full range of plant and/or equipment required to conduct to undertake the task in the workplace
- use of up-to-date equipment and software

- reflects   times and deadlines
- shows the complexity of dealing with multiple tasks
- involves prioritising among competing tasks
- work with others in a team
- communication with diverse groups
- finding, discuss and test solutions to problems
- exploring Occupational Health and Safety issues
- answering practically oriented, applied knowledge questions
- showing the level of written and verbal expression sufficient for, but not exceeding, the work requirements
- reflecting the requirement for a range of different conditions to be demonstrated

Assessment of competency requires the collection of evidence and this should be conducted over a period of time (at the workplace and/or a simulated work environment) to ensure that the demonstration of competency is valid and reliable. The individual being assessed should be aware that collection of evidence needs to be ongoing and they, therefore, need to be part of the planning, conduct and review of the assessment process.

The requirements for assessment for all RII units of competency requirements are stated in the Evidence Guide of the unit of competency and the training package assessment guidelines.   All RII units of competency state:

Critical aspects for assessment and evidence required to demonstrate competency in the unit includes:

- knowledge of the requirements, procedures and instructions for the task
- *implementation* of requirements, procedures and techniques for the safe, effective and efficient completion of the task
- working with others to undertake and complete the task
- *consistent* timely *completion of the task*

Context of and specific resources for assessment which states:

- This unit must be assessed *in the context of the work environment.* Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it *is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.*
- Assessment of this competency *requires typical resources normally used in a resources and* infrastructure sector environment. Selection and use of resources for particular worksites may differ due to the site circumstances.

Assessment in the *work environment* means that the candidate is assessed in a context that is a workplace, or that very closely replicates a workplace. The collection *of evidence should be conducted over a period of time (at the workplace) to ensure that the demonstration of competency is valid and reliable*. The candidate should be aware that *collection of evidence needs to be ongoing* and they need to be part of the planning, conduct and review of the assessment process.

Method of assessment

The assessment strategy for this unit must verify *required knowledge and skill and practical application using more than one of the following assessment methods*:

- written and/or oral assessment of the candidate's required knowledge
- *observed,* documented and/or first hand testimonial evidence of the candidate's:

- *implementation* of appropriate requirements, procedures and techniques for the safe, effective and efficient achievement of required outcomes
- *consistent* achievement of required outcomes
- *first hand testimonial* evidence of the candidate's working with others to *undertake and complete* the task

The assessment must ensure that it addresses all areas of the *application* of Required Skills and Knowledge in the context of the Range Statement, in the work environment to satisfy the performance criteria to the standard of the workplace.

Supporting integrated training delivery and assessment

As a general principle, the Resources and Infrastructure industries support the integration of units of competency for assessment, where practical. An integrated approach reflects real work practices in that it brings together a number of units of competency. For example, an employee working on a worksite would complete a number of interrelated functions and occupational, health and safety tasks at the same time, not simply one task at a time. An integrated assessment activity would be designed to collect evidence for a number of units together rather than designing one assessment activity for each individual element of the relevant performance criteria.

Where both training and assessment are required, industry supports an approach which provides for off-the-job training combined with assessment of the application of skills and knowledge in a real work situation.

The Resources and Infrastructure training package defines off-the-job assessment as that which occurs away from the normal operation of the business including, for example, assessment which may occur in the workplace but not under normal industry working conditions. The industry considers it important for candidates to have the opportunity to develop competency in structured learning programs, which includes assessing in the workplace whenever possible.

The Resources and Infrastructure training package defines on-the-job assessment as that assessment which occurs in the workplace as part of the normal operation of the business. Where an integrated competency assessment approach is implemented it is expected that several integrated competency assessments would be necessary to cover the breadth and complexity of the qualification, from Certificate I to Advanced Diploma.

The context of the assessment, the role of the candidate and the complexity of the task will influence how many units of competency are to be integrated.

Ways *of minimising the cost of the assessment process*

RTOs 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
- use of technology to support training and assessment strategies eg teleconferencing, videoconferencing, digital media, Elearning, email

Assessment strategies

Each RTO must have strategies for training and assessment that meet the requirements of the relevant training package or accredited course and are developed in consultation with industry stakeholders.

See the *AQTF 2010 Essential Conditions and Standards for Continuing Registration* and the *AQTF Essential Conditions and Standards for Initial Registration* and or/the Standards for NVR Registered Training Organisations *for RTOs registered with the Australian Skills Quality Authority (ASQA).*

SkillsDMC strongly recommends the implementation of a systems approach in implementing training and assessment. This will incorporate an enterprise and individual training needs analysis, training and assessment (as required), issuance of accreditation as applicable and support to fulfil relevant licensing requirements, evaluation and review.

The Skills Maximiser training needs analysis and workforce planning and development tool has been developed in consultation with industry to support the systems approach to training. Contact skillsdmc@skillsdmc.com.au for further information.

RTOs not utilising the tools available through the industry skills council are advised to ensure that their own planning tools reflect, at the least, an equivalent degree of planning and recognition of the application of competence as it is demonstrated in the workplace.

Assessment of competency will be in accordance with the relevant industry sector and state legislation applying in each state and territory. This will include:

- Duty of care requirements
- Occupational Health and Safety Acts and Regulations
- Environmental Protection Acts and Regulations
- Heritage Protection Acts and Regulations
- Petroleum Acts and Regulations

In certain circumstances other legislation/regulations will also be relevant including:

- Mining Acts and Regulations
- Submerged Lands Acts and Regulations
- Dangerous Goods Regulations
- Water Drilling Licensing requirements

Where units of competency have been imported from another training package (i.e. the unit code does NOT have the 'RII' prefix), the RTO responsible for the assessment should check the assessment guidelines covering those units of competency in their source training package.

Assessment **considerations**

Some sections of the industry operate in remote areas which are not conducive to multiple visits from assessors. The competency however requires a consistent performance which may not be assessable by a single site visit. The assessment design may therefore need to include other evidence such as:

- third party report
- range of documentation completed by the candidate (such as drill logs)
- statement of curricular activities verified by the supervisor
- evidence of training undertaken and course outline details

These can be collected/viewed by the assessor to aid in the judgement of consistent performance to the required standard.

Assessing using a formal assessment team in the one place at the one time is often not practical and so the assessor will frequently need to rely on evidence provided by supervisors, other work colleagues, written records and documentation to assist in making the judgement of competency.

Interviews, questioning of the candidate and formal answers to written or oral tests customised and documented by the assessor or RTO may be gathered as evidence for judging competency subject to audit by the RTO issuing the qualification or statement of attainment. Units of competency have generally been written with a focus on a workplace assessment environment.

Pathways in this training package

Qualifications in this training package may be achieved through a range of implementation methodologies.   It is a requirement that all units of competency are assessed based on evidence of the demonstration of competency in the work environment.

In addition to enterprise based delivery, pathways may include:

Qualification Code	Title	Training Pathways
RII10109	Certificate I in Resources and Infrastructure Operations	VET in Schools (including work placement)
RII20109	Certificate II in Resources and Infrastructure Work Preparation	VET in Schools (including work placement)
RII20209	Certificate II in Surface Extraction Operations	Australian Apprenticeship
RII20309	Certificate II in Underground Coal Mining	Australian Apprenticeship
RII20409	Certificate II in Underground Metalliferous Mining	Australian Apprenticeship
RII20509	Certificate II in Resource Processing	Australian Apprenticeship
RII20609	Certificate II in Mining/Field Exploration Operations	Australian Apprenticeship
RII20712	Certificate II in Civil Construction	Australian Apprenticeship
RII20809	Certificate II in Bituminous Surfacing	Australian Apprenticeship

Qualification Code	Title	Training Pathways
RII20909	Certificate II in Drilling Operations	Australian Apprenticeship
RII21009	Certificate II in Drilling Oil/Gas (Off shore)	Australian Apprenticeship
RII21109	Certificate II in Drilling Oil/Gas (On shore)	Australian Apprenticeship
RII30112	Certificate III in Surface Extraction Operations	Australian Apprenticeship
RII30212	Certificate III in Underground Coal Operations	Australian Apprenticeship
RII30311	Certificate III in Underground Metalliferous Mining	Australian Apprenticeship
RII30411	Certificate III in Resource Processing	Australian Apprenticeship
RII30509	Certificate III in Mining Exploration	Australian Apprenticeship
RII30611	Certificate III in Small Mining Operations	Australian Apprenticeship
RII30709	Certificate III in Mine Emergency Response and Rescue	Australian Apprenticeship
RII30809	Certificate III in Civil Construction Plant Operations	Australian Apprenticeship
RII30912	Certificate III in Civil Construction	Australian Apprenticeship
RII31209	Certificate III in Civil Foundations	Australian Apprenticeship
RII31609	Certificate III in Trenchless Technology	Australian Apprenticeship
RII31809	Certificate III in Drilling Operations	Australian Apprenticeship
RII31909	Certificate III in Drilling Oil/Gas (Off shore)	Australian Apprenticeship
RII32009	Certificate III in Drilling Oil/Gas (On shore)	Australian Apprenticeship
RII40109	Certificate IV in Surface Extraction Operations	Australian Apprenticeship
RII40212	Certificate IV in Surface Coal Mining (Open Cut Examiner)	Australian Apprenticeship
RII40311	Certificate IV in Metalliferous Mining Operations (Underground)	Australian Apprenticeship
RII40412	Certificate IV in Underground Coal Operations	Australian Apprenticeship

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Qualification Code	Title	Training Pathways
RII40509	Certificate IV in Resource Processing	Australian Apprenticeship
RII40609	Certificate IV in Civil Construction Operations	Australian Apprenticeship
RII40712	Certificate IV in Civil Construction Supervision	Australian Apprenticeship
RII40809	Certificate IV in Civil Construction Design	Australian Apprenticeship
RII40909	Certificate IV in Drilling Operations	Australian Apprenticeship
RII41009	Certificate IV in Drilling Oil/Gas (Off shore)	Australian Apprenticeship
RII41109	Certificate IV in Drilling Oil/Gas (On shore)	Australian Apprenticeship
RII50109	Diploma of Surface Operation Management	Australian Apprenticeship
RII50209	Diploma of Underground Metalliferous Mining Management	Australian Apprenticeship
RII50309	Diploma of Minerals Processing	Australian Apprenticeship
RII50409	Diploma of Civil Construction Management	Australian Apprenticeship
RII50509	Diploma of Civil Construction Design	Australian Apprenticeship
RII50609	Diploma of Drilling Operations	Australian Apprenticeship
RII50709	Diploma of Drilling Oil/Gas (Off shore)	Australian Apprenticeship
RII50809	Diploma of Drilling Oil/Gas (On shore)	Australian Apprenticeship
RII50912	Diploma of Underground Coal Mining Management	Australian Apprenticeship
RII60109	Advanced Diploma of Metalliferous Mining	Australian Apprenticeship
RII60209	Advanced Diploma of Extractive Industries Management	Australian Apprenticeship
RII60312	Advanced Diploma of Underground Coal Mining Management	Australian Apprenticeship
RII60409	Advanced Diploma of Drilling Management	Australian Apprenticeship
RII60509	Advanced Diploma of Civil Construction	Australian Apprenticeship

Qualification Code	Title	Training Pathways
	Design	
RII60609	Advanced Diploma of Civil Construction	Australian Apprenticeship
RII60709	Advanced Diploma of Surface Coal Mining Management	Australian Apprenticeship

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*** Mining regulatory authority website details***
NSW Department of Department of Minerals and Petroleum www.minerals.nsw.gov.au

Queensland Department of Environment and Resource Management
http://www.derm.qld.gov.au/
Tasmanian Department of Infrastructure, Energy and Resources, www.mrt.tas.gov.au
Victorian Department of Primary Industries www.dpi.vic.gov.au
Northern Territory Department of Resources — Minerals and Energy
http://www.nt.gov.au/d/Minerals_Energy/
Western Australian Department of Mines and Petroleum http://www.dmp.wa.gov.au/
South Australian Department of Primary Industries and Resources www.pir.sa.gov.au
Waterwell regulatory authority details
Australian Drilling Industry Training Committee Ltd www.aditc.com.au (examining body)
NSW Office of Water http://www.water.nsw.gov.au/Home/default.aspx
NT Department of Natural Resources, Environment, the Arts and Sport www.nreta.nt.gov.au
QLD Department of Environment and Resource Management: http://www.derm.qld.gov.au/
SA Department for Water http://www.waterforgood.sa.gov.au/
TAS Department of Primary Industries, Parks, Water and Environment www.dpiw.tas.gov.au
VIC Department of Sustainability and Environment www.dse.vic.gov.au
Australian Drilling Industry Association www.adia.com.au
Energy regulatory authority **details** (relevant for Coal Seam Gas drilling and Oil/Gas drilling)
NSW Department of Minerals and Petroleum www.minerals.nsw.gov.au
NSW Office of Water http://www.water.nsw.gov.au/Home/default.aspx
National Offshore Petroleum Standards Authority www.nopsa.gov.au
QLD Department of Environment and Resource Management: http://www.derm.qld.gov.au/
SA Department Primary Industries and Resources www.pir.sa.gov.au
VIC Department of Primary Industries — Energy www.dpi.vic.gov.au
WA Department of Mines and Petroleum http://www.dmp.wa.gov.au/
Department of Resources — Minerals and Energy www.minerals.nt.gov.au

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 Assessment Guidelines of the Training Package, and the AQTF, 2 where relevant, the Australian Qualifications Framework.

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 Australian 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.

Credit Pathways

Credit is the value assigned for the recognition of equivalence in content between different types of learning and/or qualifications which reduces the volume of learning required to achieve a qualification.

Credit arrangements must be offered by all RTOs that offer Training Package qualifications. Each RTO must have a systematic institutional approach with clear, accessible and transparent policies and procedures.

competency in this Training Package, and should be recognised regardless of how, when or where they were acquired, provided that the learning is relevant to the unit of competency outcomes.

Recognition of Prior Learning

Recognition of Prior Learning (RPL) is an assessment process which determines the credit outcomes of an individual application for credit.

The availability of Recognition of Prior Learning (RPL) provides all potential learners with access to credit opportunities.

The recognition of prior learning pathway is appropriate for candidates who have previously attained skills and knowledge and who, when enrolling in qualifications, seek to shorten the duration of their training and either continue or commence working. This may include the following groups of people:

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.

As with all assessment, RPL assessment should be undertaken by academic or teaching staff with expertise in the subject, content of skills area, as well as knowledge of and expertise in RPL assessment policies and procedures.

Assessment methods used for RPL should provide a range of ways for individuals to demonstrate that they have met the required outcomes and can be granted credit. These might include:

questioning (oral or written)

consideration of a portfolio and review of contents

consideration of third party reports and/or other documentation such as documentation such as articles, reports, project material, papers, testimonials or other products prepared by the RPL applicant that relate to the learning outcomes of the relevant qualification component

mapping of learning outcomes from prior formal or non-formal learning to the relevant qualification components

observation of performance, and

participation in structured assessment activities the individual would normally be required to undertake if they were enrolled in the qualification component/s.

In a 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. Where the outcomes of this process indicate that the candidate is competent, structured training is not required. The RPL requirements of the AQTF 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, work samples and/or observation of the candidate. 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).

Credit Transfer

Credit transfer is a process which provides learners with agreed and consistent credit outcomes based on equivalences in content between matched qualifications.

This process involves education institutions:

mapping, comparing and evaluating the extent to which the defined learning outcomes and assessment requirements of the individual components of one qualification are equivalent to the learning outcomes and assessment requirements of the individual components of another qualification

making an educational judgment of the credit outcomes to be assigned between the matched components of the two qualifications

setting out the agreed credit outcomes in a documented arrangement or agreement, and publicising the arrangement/agreement and credit available.

Combination of Pathways

Credit may be awarded on the basis of a combination of credit transfer plus an individual RPL assessment for additional learning. Once credit has been awarded on the basis of RPL, subsequent credit transfer based on these learning outcomes should not include revisiting the RPL assessment but should be based on credit transfer or articulation or other arrangements between providers.

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 specific requirements on the vocational competence and experience for assessors, to ensure that they meet the needs of industry and their obligations under AQTF, and clarifies how others may contribute to the assessment process where one person alone does not hold all the required competencies.

Assessor Competencies

The AQTF specifies mandatory competency requirements for assessors. For information, Element 1.4 from the AQTF 2007 *Essential Standards for Registration* follows:

1.4		Training and assessment is delivered by trainers and assessors who:
	a)	have the necessary training and assessment competencies as determined by the National Quality Council or its successors, and
	b)	have the relevant vocational competencies at least to the level being delivered or assessed, and
	c)	can demonstrate current industry skills directly relevant to the training/assessment being undertaken, and
	d)	continue developing their Vocational Education and Training (VET) knowledge and skills as well as their industry currency and trainer/assessor competence. * See AQTF 2010 *Users" Guide to the Essential Standards for Registration* Appendix 2

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 judgments 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 relate to the current version of the relevant unit of competency. The current unit of competency can be checked on the National Register <www.ntis.gov.au>.

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 continuous improvement of assessment strategies as required under Standard 1 of the AQTF 2007

• meet the assessment requirements expressed in Standard 1 of the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

A key reference for assessors developing assessment tools is TAE10 Training and Education Training Package.

Language, Literacy and Numeracy

The design of assessment tools must reflect the language, literacy and numeracy competencies required for the performance of a task in the workplace and not exceed these expectations.

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 the 2010 *Essential Standards for Initial and Continuing Registration*. For information, the mandatory assessment requirements from Standard 1 from the AQTF 2010 *Essential Standards for Initial and Continuing Registration* are as follows:

1.5		Assessment, including Recognition of Prior Learning:
	a)	meets the requirements of the relevant Training Package or accredited course,
	b)	is conducted in accordance with the principles of assessment and the rules of evidence, and
	c)	meets workplace and, where relevant, regulatory requirements.
	d)	is systematically validated.

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Assessment of Employability Skills

Employability Skills are integral to workplace competency. As such they 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.

Employability Skills are embedded and explicit within each unit of competency, and an Employability Skills Summary is available for each qualification. Training providers must use Employability Skills information in order to design valid and reliable training and assessment strategies. This analysis could include:
•   reviewing units of competency to locate relevant Employability Skills and determine how they are applied within the unit
•   analysing the Employability Skills Summary for the qualification in which the unit or units are packaged to help clarify relevant industry and workplace contexts and the application of Employability Skills at that qualification outcome
•   designing training and assessment to address Employability Skills   requirements.
The National Quality Council has endorsed a model for assessing and reporting Employability Skills, which contains further suggestions about good practice strategies in teaching, assessing, learning and reporting Employability Skills. The model is available from <http://www.training.com.au/>.
The endorsed approach includes learners downloading qualification specific Employability Skills Summaries for Training Package qualifications from an online repository at <http://employabilityskills.training.com.au>
For more information on Employability Skills in SkillsDMC (Resources and Infrastructure Industry Skills Council) Training Packages go to the SkillsDMC (Resources and Infrastructure Industry Skills Council) website at http://www.skillsdmc.com.au.
Employability Skills are reported on each qualification using the following statement on the qualification testamur: "A summary of the Employability Skills developed through this qualification can be downloaded from http://employabilityskills.training.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: training and assessment must be bias-free.
Under the rules for their development, Training Packages must reflect and cater for the increasing diversity of Australia"s VET clients and Australia"s current and future workforce. The flexibilities offered by Training Packages should enhance opportunities and potential outcomes for all people so that we can all benefit from a wider national skills base and a shared contribution to Australia"s economic development and social and cultural life.

Reasonable adjustments
It is important that education providers take meaningful, transparent and reasonable steps to consult, consider and implement reasonable adjustments for students with disability.
Under the *Disability Standards for Education 2005*, education providers must make reasonable adjustments for people with disability to the maximum extent that those adjustments do not cause that provider unjustifiable hardship. While "reasonable adjustment" and "unjustifiable hardship" are different concepts and involve different considerations, they both seek to strike a balance between the interests of education providers and the interests of students with and without disability.
An adjustment is any measure or action that a student requires because of their disability, and which has the effect of assisting the student to access and participate in education and training on the same basis as students without a disability. An adjustment is reasonable if it achieves this purpose while taking into account factors such as the nature of the student"s disability, the views of the student, the potential effect of the adjustment on the student and others who might be affected, and the costs and benefits of making the adjustment.

An education provider is also entitled to maintain the academic integrity of a course or program and to consider the requirements or components that are inherent or essential to its nature when assessing whether an adjustment is reasonable. There may be more than one adjustment that is reasonable in a given set of circumstances; education providers are required to make adjustments that are reasonable and that do not cause them unjustifiable hardship. The Training Package Guidelines provides more information on reasonable adjustment, including examples of adjustments. *Go to* http://www.deewr.gov.au/tpdh/Pages/home.aspx.

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

• 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.

Employability Skills statement

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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.

Prerequisite Units (optional)

If there are any units of competency that must be completed before the unit, these will be listed.

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.

Competency Field (Optional)

The competency field either reflects the way the units of competency are categorised in the Training Package or denotes the industry sector, specialisation or function. It is an optional component of the unit of competency.

Sector (optional)

The industry sector is a further categorisation of the competency field and identifies the next classification, for example an elective or supervision field.

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 expectations at the AQF qualification level involved

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.

Employability Skills	**Mayer Key Competencies**
Communication	Communicating ideas and information
Teamwork	Working with others and in teams
Problem solving	Solving problems Using mathematical ideas and techniques
Initiative and enterprise	
Planning and organising	Collecting, analysing and organising information Planning and organising activities
Self-management	
Learning	
Technology	Using technology

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.

Example Employability Skills unit

Unit component	Example of embedded Employability Skill
Unit Title	RIIMEX201A Suppress dust in open cut environment
Unit Descriptor	This unit covers suppressing of dust in an open cut environment in the coal and metalliferous mining and extractive industries. It includes applying dust suppressant and minimising dust creation
Element	1 Apply dust suppressant
Performance Criteria	1 Access, interpret and apply *compliance documentation* relevant to suppressing of dust in an open cut environment 2 Receive, interpret and clarify shift changeover details 3 Select appropriate *dust suppression* method according to site conditions 4 Distribute dust suppressant in appropriate pattern according to road type 5 Adjust dust suppression activities according to schedule and weather conditions 6 Identify, address and report *environmental issues* 7 Communicate with other personnel using approved communication methods 8 Adhere to emergency procedures to ensure safety of personnel, plant and equipment
Range Statement	**Relevant compliance documentation**

	may include: • legislative, organisational and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • code of practice • Employment and Workplace Relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Required Skills and Knowledge	**Required Skills** Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to suppress dust in open cut environment: • apply legislative, organisation and site requirements and procedures • make decisions • direct and signal • clean equipment • maintain equipment • operate equipment • follow instructions • identify hazards • interpret plans, reports, maps, specifications • maintain records • follow safe work practices • troubleshoot • wear protective equipment **Required Knowledge**

	Specific knowledge is required to achieve the performance criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used.
	This includes knowledge of the following as required to suppress dust in open cut environment:
	• emergency procedures
	• environmental aspects
	• equipment processes, technical capability and limitations
	• equipment safety requirements
	• geological and technical data (rock formation)
	• maintenance procedures
	• mine operation system
	• OHS procedures
	• plan terminology
	• site procedures (operational and maintenance)
	• site safety requirements
	• sprinkler operation
	• water truck operation

Evidence Guide	**Critical aspects for assessment and evidence required to demonstrate competency in this unit**
	The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following: • knowledge of the requirements, procedures and instructions for suppressing of dust in open cut environment • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of the suppressing of dust in open cut environment • working with others to suppress dust in open cut environment that meets all of the required outcomes • consistent timely suppressing of dust in open cut environment that safely, effectively and efficiently meets the required outcomes