

Certificates of Competence


*UNIT STANDARD AND
QUALIFICATION REQUIREMENTS*

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Te Kāwanatanga o Aotearoa
New Zealand Government

WORKSAFE
Mahi Haumarū Aotearoa



This document details the qualification and unit standard competency requirements for each Certificate of Competence.

An applicant must have completed all of the relevant requirements before submitting an application for a new Certificate of Competence.

For further information on other competency requirements and how to apply for a new Certificate of Competence, please refer to the WorkSafe website: worksafe.govt.nz/topic-and-industry/extractives/cocs-and-cpd/applications-for-certificates-of-competence/new-applications

If a person intends to work in an operation that uses explosives, work underground or in an operation involved in coal exploration, they must apply separately to have the additional requirements for this work added to a new or existing Certificate of Competence. Please refer to the WorkSafe website for further information on this: worksafe.govt.nz/topic-and-industry/extractives/cocs-and-cpd/applications-for-certificates-of-competence/additional-competency-requirements

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Senior Site Executive

UNIT STANDARD NUMBER	TITLE
7142	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site
16810	Develop a Workplace Emergency Management Plan
28739	Establish and maintain risk management systems at an extractive site
28740	Establish and maintain the work, health and safety (WHS) management system at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System

First-class Mine Manager

UNIT STANDARD NUMBER	TITLE
7142	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site
7143	Inspect and report on safety and operations at an extractive site
7145	Design and maintain effective ventilation systems for an underground coal mine
7146	Demonstrate basic knowledge and ability required to work in an underground operation
8902	Prepare a safety inspection plan for extractive operations
8905	Demonstrate knowledge of construction and maintenance of working surfaces at an extractive site
15662	Evaluate ground conditions and support methods for maintaining stability in underground operations
15663	Demonstrate knowledge of the geotechnical requirements for ground stability at surface extraction sites
15664	Demonstrate introductory knowledge of geology at surface extraction sites
15665	Demonstrate knowledge of geology and geotechnical features and failures for surface extraction
15666	Demonstrate knowledge of geology for underground extraction
16686	Conduct an incident investigation at an extractive site
17691	Use mathematics to solve problems in an extractive industries workplace
17693	Explain and determine water flow, and describe the selection of pumps and structures for an extractive site
17694	Demonstrate knowledge of explosives and their properties
17743	Demonstrate knowledge of survey principles and apply to an extraction site
17744	Read and interpret extractive site plans
19522	Undertake job safety analysis
21151	Demonstrate knowledge of planning rehabilitation operations for an extractive site
21152	Demonstrate and apply knowledge of storing explosives for use
21155	Demonstrate knowledge of the management and use of water at an extractive site
21156	Demonstrate knowledge of planning and managing extraction to minimise environmental impacts
21278	Describe, install, and reassess support systems for an underground operation
21281	Test for gases, interpret findings, and demonstrate knowledge of follow-up actions in an underground coal mine
21629	Evaluate plans to manage old workings and inundations at extractive sites
21821	Maintain and install services for an underground operation
22057	Demonstrate knowledge of pneumatic and hydraulic power systems used in extractive operations
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
26855	Analyse Human Factors present in workplace practices at an extractive site
28982	Develop standard operating procedures for an extractive site
28983	Carry out the risk management process at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System

UNIT STANDARD NUMBER	TITLE
30902	Demonstrate knowledge of extraction methods, and selection of plant and equipment for surface extraction
30903	Demonstrate knowledge of mining methods, and analyse and select plant for metalliferous underground extraction
30905	Demonstrate knowledge of the Underground Mines Emergency Protocol
31092	Demonstrate knowledge of conveyors, and crushing and screening plant for extractive industries
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System
32283	Explain hazards and controls associated with stockpiling and tip heads at extractive sites
FIRST AID UNIT STANDARDS	
6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

First-class Coal Mine Manager

UNIT STANDARD NUMBER	TITLE
7142	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site
7143	Inspect and report on safety and operations at an extractive site
7145	Design and maintain effective ventilation systems for an underground coal mine
7146	Demonstrate basic knowledge and ability required to work in an underground operation
8902	Prepare a safety inspection plan for extractive operations
8905	Demonstrate knowledge of construction and maintenance of working surfaces at an extractive site
15662	Evaluate ground conditions and support methods for maintaining stability in underground operations
15663	Demonstrate knowledge of the geotechnical requirements for ground stability at surface extraction sites
15665	Demonstrate knowledge of geology and geotechnical features and failures for surface extraction
15666	Demonstrate knowledge of geology for underground extraction
16686	Conduct an incident investigation at an extractive site
17691	Use mathematics to solve problems in an extractive industries workplace
17693	Explain and determine water flow, and describe the selection of pumps and structures for an extractive site
17694	Demonstrate knowledge of explosives and their properties
17743	Demonstrate knowledge of survey principles and apply to an extraction site
17744	Read and interpret extractive site plans
19522	Undertake job safety analysis
21151	Demonstrate knowledge of planning rehabilitation operations for an extractive site
21152	Demonstrate and apply knowledge of storing explosives for use
21155	Demonstrate knowledge of the management and use of water at an extractive site
21156	Demonstrate knowledge of planning and managing extraction to minimise environmental impacts
21278	Describe, install, and reassess support systems for an underground operation
21280	Demonstrate knowledge and evaluate the design of an effective ventilation system in an underground mine
21281	Test for gases, interpret findings, and demonstrate knowledge of follow-up actions in an underground coal mine
21629	Evaluate plans to manage old workings and inundations at extractive sites
21661	Demonstrate knowledge of the use of electrical reticulation plant and equipment in extractive operations
21662	Demonstrate knowledge of development and extraction plant and methods for underground coal mining
21821	Maintain and install services for an underground operation
22057	Demonstrate knowledge of pneumatic and hydraulic power systems used in extractive operations
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
26855	Analyse Human Factors present in workplace practices at an extractive site
28982	Develop standard operating procedures for an extractive site
28983	Carry out the risk management process at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure

UNIT STANDARD NUMBER	TITLE
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System
30902	Demonstrate knowledge of extraction methods, and selection of plant and equipment for surface extraction
30904	Demonstrate knowledge of mining methods, and analyse and select plant for underground coal mines
30905	Demonstrate knowledge of the Underground Mines Emergency Protocol
31092	Demonstrate knowledge of conveyors, and crushing and screening plant for extractive industries
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System
32283	Explain hazards and controls associated with stockpiling and tip heads at extractive sites
FIRST AID UNIT STANDARDS	
6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

A-grade Opencast Coal Mine Manager

UNIT STANDARD NUMBER	TITLE
7142	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site
7143	Inspect and report on safety and operations at an extractive site
8902	Prepare a safety inspection plan for extractive operations
8905	Demonstrate knowledge of construction and maintenance of working surfaces at an extractive site
15663	Demonstrate knowledge of the geotechnical requirements for ground stability at surface extraction sites
15664	Demonstrate introductory knowledge of geology at surface extraction sites
16686	Conduct an incident investigation at an extractive site
19522	Undertake job safety analysis
21151	Demonstrate knowledge of planning rehabilitation operations for an extractive site
21155	Demonstrate knowledge of the management and use of water at an extractive site
21156	Demonstrate knowledge of planning and managing extraction to minimise environmental impacts
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
26855	Analyse Human Factors present in workplace practices at an extractive site
28982	Develop standard operating procedures for an extractive site
28983	Carry out the risk management process at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System
30902	Demonstrate knowledge of extraction methods, and selection of plant and equipment for surface extraction
31092	Demonstrate knowledge of conveyors, and crushing and screening plant for extractive industries
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System
32283	Explain hazards and controls associated with stockpiling and tip heads at extractive sites
32284	Follow, maintain and recommend modifications for stockpiling and tip head management plans at an extractive site
FIRST AID UNIT STANDARDS	
6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

Additional requirements for an A-grade Opencast Coal Mine Manager Certificate of Competence

If an applicant for an A-grade Opencast Coal Mine Manager Certificate of Competence intends to **work in an operation that uses explosives**, they must apply separately to have the additional requirements for this type of work added to their Certificate of Competence. They must first complete the additional unit standards below:

UNIT STANDARDS FOR ADDITIONAL REQUIREMENTS – WORK IN AN OPERATION USING EXPLOSIVES	
17694	Demonstrate knowledge of explosives and their properties
21152	Demonstrate and apply knowledge of storing explosives for use

B-grade Opencast Coal Mine Manager

UNIT STANDARD NUMBER	TITLE
7142 or 28742	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site, or Explain legislation related to health and safety, and supporting documents, applicable to an extractive site
8902	Prepare a safety inspection plan for extractive operations
8905	Demonstrate knowledge of construction and maintenance of working surfaces at an extractive site
16686	Conduct an incident investigation at an extractive site
19522	Undertake job safety analysis
21155	Demonstrate knowledge of the management and use of water at an extractive site
21156	Demonstrate knowledge of planning and managing extraction to minimise environmental impacts
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
26855	Analyse Human Factors present in workplace practices at an extractive site
28983	Carry out the risk management process at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System
31092	Demonstrate knowledge of conveyors, and crushing and screening plant for extractive industries
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System
32283	Explain hazards and controls associated with stockpiling and tip heads at extractive sites
32284	Follow, maintain and recommend modifications for stockpiling and tip head management plans at an extractive site
FIRST AID UNIT STANDARDS	
6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

Additional requirements for a B-grade Opencast Coal Mine Manager Certificate of Competence

If an applicant for a B-grade Opencast Coal Mine Manager Certificate of Competence intends to **work in an operation that uses explosives**, they must apply separately to have the additional requirements for this type of work added to their Certificate of Competence. They must first complete the additional unit standards below:

UNIT STANDARDS FOR ADDITIONAL REQUIREMENTS - WORK IN AN OPERATION USING EXPLOSIVES	
17694	Demonstrate knowledge of explosives and their properties
21152	Demonstrate and apply knowledge of storing explosives for use

A-grade Metalliferous Mine Manager

UNIT STANDARD NUMBER	TITLE
7142	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site
7143	Inspect and report on safety and operations at an extractive site
7145	Design and maintain effective ventilation systems for an underground coal mine
7146	Demonstrate basic knowledge and ability required to work in an underground operation
15662	Evaluate ground conditions and support methods for maintaining stability in underground operations
15666	Demonstrate knowledge of geology for underground extraction
16686	Conduct an incident investigation at an extractive site
17691	Use mathematics to solve problems in an extractive industries workplace
17694	Demonstrate knowledge of explosives and their properties
19522	Undertake job safety analysis
21151	Demonstrate knowledge of planning rehabilitation operations for an extractive site
21152	Demonstrate and apply knowledge of storing explosives for use
21278	Describe, install, and reassess support systems for an underground operation
21281	Test for gases, interpret findings, and demonstrate knowledge of follow-up actions in an underground coal mine
21661	Demonstrate knowledge of the use of electrical reticulation plant and equipment in extractive operations
21821	Maintain and install services for an underground operation
22057	Demonstrate knowledge of pneumatic and hydraulic power systems used in extractive operations
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
26855	Analyse Human Factors present in workplace practices at an extractive site
28982	Develop standard operating procedures for an extractive site
28983	Carry out the risk management process at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System
30903	Demonstrate knowledge of mining methods, and analyse and select plant for metalliferous underground extraction
30905	Demonstrate knowledge of the Underground Mines Emergency Protocol
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System
32283	Explain hazards and controls associated with stockpiling and tip heads at extractive sites
FIRST AID UNIT STANDARDS	
6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

B-grade Metalliferous Mine Manager

UNIT STANDARD NUMBER	TITLE
7142 or 28742	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site, or Explain legislation related to health and safety, and supporting documents, applicable to an extractive site
7143	Inspect and report on safety and operations at an extractive site
7146	Demonstrate basic knowledge and ability required to work in an underground operation
16686	Conduct an incident investigation at an extractive site
17691	Use mathematics to solve problems in an extractive industries workplace
17694	Demonstrate knowledge of explosives and their properties
17705	Describe, develop, and maintain basic ventilation systems for an underground coal mine
19522	Undertake job safety analysis
21152	Demonstrate and apply knowledge of storing explosives for use
21278	Describe, install, and reassess support systems for an underground operation
21281	Test for gases, interpret findings, and demonstrate knowledge of follow-up actions in an underground coal mine
21661	Demonstrate knowledge of the use of electrical reticulation plant and equipment in extractive operations
21821	Maintain and install services for an underground operation
22057	Demonstrate knowledge of pneumatic and hydraulic power systems used in extractive operations
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
26855	Analyse Human Factors present in workplace practices at an extractive site
28983	Carry out the risk management process at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System
30905	Demonstrate knowledge of the Underground Mines Emergency Protocol
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System
32283	Explain hazards and controls associated with stockpiling and tip heads at extractive sites
FIRST AID UNIT STANDARDS	
6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

A-grade Quarry Manager

UNIT STANDARD NUMBER	TITLE
7142	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site
7143	Inspect and report on safety and operations at an extractive site
8902	Prepare a safety inspection plan for extractive operations
8905	Demonstrate knowledge of construction and maintenance of working surfaces at an extractive site
15663	Demonstrate knowledge of the geotechnical requirements for ground stability at surface extraction sites
15664	Demonstrate introductory knowledge of geology at surface extraction sites
16686	Conduct an incident investigation at an extractive site
19522	Undertake job safety analysis
21151	Demonstrate knowledge of planning rehabilitation operations for an extractive site
21155	Demonstrate knowledge of the management and use of water at an extractive site
21156	Demonstrate knowledge of planning and managing extraction to minimise environmental impacts
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
26855	Analyse Human Factors present in workplace practices at an extractive site
28982	Develop standard operating procedures for an extractive site
28983	Carry out the risk management process at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System
30902	Demonstrate knowledge of extraction methods, and selection of plant and equipment for surface extraction
31092	Demonstrate knowledge of conveyors, and crushing and screening plant for extractive industries
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System
32283	Explain hazards and controls associated with stockpiling and tip heads at extractive sites
32284	Follow, maintain and recommend modifications for stockpiling and tip head management plans at an extractive site
FIRST AID UNIT STANDARDS	
6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

Additional requirements for an A-grade Quarry Manager Certificate of Competence

If an applicant for an A-grade Quarry Manager Certificate of Competence intends to **work in an operation that uses explosives**, they must apply separately to have the additional requirements for this type of work added to their Certificate of Competence. They must first complete the additional unit standards below:

UNIT STANDARDS FOR ADDITIONAL REQUIREMENTS – WORK IN AN OPERATION USING EXPLOSIVES	
17694	Demonstrate knowledge of explosives and their properties
21152	Demonstrate and apply knowledge of storing explosives for use

B-grade Quarry Manager

UNIT STANDARD NUMBER	TITLE
7142 or 28742	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site, or Explain legislation related to health and safety, and supporting documents, applicable to an extractive site
8902	Prepare a safety inspection plan for extractive operations
8905	Demonstrate knowledge of construction and maintenance of working surfaces at an extractive site
16686	Conduct an incident investigation at an extractive site
19522	Undertake job safety analysis
21155	Demonstrate knowledge of the management and use of water at an extractive site
21156	Demonstrate knowledge of planning and managing extraction to minimise environmental impacts
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
26855	Analyse Human Factors present in workplace practices at an extractive site
28983	Carry out the risk management process at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System
31092	Demonstrate knowledge of conveyors, and crushing and screening plant for extractive industries
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System
32283	Explain hazards and controls associated with stockpiling and tip heads at extractive sites
32284	Follow, maintain and recommend modifications for stockpiling and tip head management plans at an extractive site
FIRST AID UNIT STANDARDS	
6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

Additional requirements for a B-grade Quarry Manager Certificate of Competence

If an applicant for a B-grade Quarry Manager Certificate of Competence intends to **work in an operation that uses explosives**, they must apply separately to have the additional requirements for this type of work added to their Certificate of Competence. They must first complete the additional unit standards below:

UNIT STANDARDS FOR ADDITIONAL REQUIREMENTS – WORK IN AN OPERATION USING EXPLOSIVES	
17694	Demonstrate knowledge of explosives and their properties
21152	Demonstrate and apply knowledge of storing explosives for use

Manager of specified quarrying operation

UNIT STANDARD NUMBER	TITLE
7142 or 28742	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site, or Explain legislation related to health and safety, and supporting documents, applicable to an extractive site
8905	Demonstrate knowledge of construction and maintenance of working surfaces at an extractive site
16686	Conduct an incident investigation at an extractive site
19522	Undertake job safety analysis
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
28793	Conduct safety inspections for extractive operations
28983	Carry out the risk management process at an extractive site
31092	Demonstrate knowledge of conveyors, and crushing and screening plant for extractive industries
FIRST AID UNIT STANDARDS	
6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

A-grade Alluvial Mine Manager

UNIT STANDARD NUMBER	TITLE
7142	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site
7143	Inspect and report on safety and operations at an extractive site
8902	Prepare a safety inspection plan for extractive operations
8905	Demonstrate knowledge of construction and maintenance of working surfaces at an extractive site
15663	Demonstrate knowledge of the geotechnical requirements for ground stability at surface extraction sites
15664	Demonstrate introductory knowledge of geology at surface extraction sites
16686	Conduct an incident investigation at an extractive site
19522	Undertake job safety analysis
21151	Demonstrate knowledge of planning rehabilitation operations for an extractive site
21155	Demonstrate knowledge of the management and use of water at an extractive site
21156	Demonstrate knowledge of planning and managing extraction to minimise environmental impacts
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
26855	Analyse Human Factors present in workplace practices at an extractive site
28982	Develop standard operating procedures for an extractive site
28983	Carry out the risk management process at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System
30902	Demonstrate knowledge of extraction methods, and selection of plant and equipment for surface extraction
31092	Demonstrate knowledge of conveyors, and crushing and screening plant for extractive industries
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System
32283	Explain hazards and controls associated with stockpiling and tip heads at extractive sites
32284	Follow, maintain and recommend modifications for stockpiling and tip head management plans at an extractive site

FIRST AID UNIT STANDARDS

6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

Additional requirements for an A-grade Alluvial Mine Manager Certificate of Competence

If an applicant for an A-grade Alluvial Mine Manager Certificate of Competence intends to **work in an operation that uses explosives**, they must apply separately to have the additional requirements for this type of work added to their Certificate of Competence. They must first complete the additional unit standards below:

UNIT STANDARDS FOR ADDITIONAL REQUIREMENTS – WORK IN AN OPERATION USING EXPLOSIVES

17694	Demonstrate knowledge of explosives and their properties
21152	Demonstrate and apply knowledge of storing explosives for use

B-grade Alluvial Mine Manager

UNIT STANDARD NUMBER	TITLE
7142 or 28742	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site, or Explain legislation related to health and safety, and supporting documents, applicable to an extractive site
8902	Prepare a safety inspection plan for extractive operations
8905	Demonstrate knowledge of construction and maintenance of working surfaces at an extractive site
16686	Conduct an incident investigation at an extractive site
19522	Undertake job safety analysis
21155	Demonstrate knowledge of the management and use of water at an extractive site
21156	Demonstrate knowledge of planning and managing extraction to minimise environmental impacts
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
26855	Analyse Human Factors present in workplace practices at an extractive site
28983	Carry out the risk management process at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System
31092	Demonstrate knowledge of conveyors, and crushing and screening plant for extractive industries
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System
32283	Explain hazards and controls associated with stockpiling and tip heads at extractive sites
32284	Follow, maintain and recommend modifications for stockpiling and tip head management plans at an extractive site
FIRST AID UNIT STANDARDS	
6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

Additional requirements for a B-grade Alluvial Mine Manager Certificate of Competence

If an applicant for a B-grade Alluvial Mine Manager Certificate of Competence intends to **work in an operation that uses explosives**, they must apply separately to have the additional requirements for this type of work added to their Certificate of Competence. They must first complete the additional unit standards below:

UNIT STANDARDS FOR ADDITIONAL REQUIREMENTS – WORK IN AN OPERATION USING EXPLOSIVES	
17694	Demonstrate knowledge of explosives and their properties
21152	Demonstrate and apply knowledge of storing explosives for use

A-grade Tunnel Manager

UNIT STANDARD NUMBER	TITLE
7142	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site
7143	Inspect and report on safety and operations at an extractive site
7146	Demonstrate basic knowledge and ability required to work in an underground operation
15662	Evaluate ground conditions and support methods for maintaining stability in underground operations
15666	Demonstrate knowledge of geology for underground extraction
15669	Demonstrate knowledge of tunnelling methods, and selection of plant and equipment for tunnelling
16686	Conduct an incident investigation at an extractive site
17691	Use mathematics to solve problems in an extractive industries workplace
19522	Undertake job safety analysis
21151	Demonstrate knowledge of planning rehabilitation operations for an extractive site
21278	Describe, install, and reassess support systems for an underground operation
21661	Demonstrate knowledge of the use of electrical reticulation plant and equipment in extractive operations
21821	Maintain and install services for an underground operation
22057	Demonstrate knowledge of pneumatic and hydraulic power systems used in extractive operations
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
26855	Analyse Human Factors present in workplace practices at an extractive site
28982	Develop standard operating procedures for an extractive site
28983	Carry out the risk management process at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System
30905	Demonstrate knowledge of the Underground Mines Emergency Protocol
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System
FIRST AID UNIT STANDARDS	
6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

Additional requirements for an A-grade Tunnel Manager Certificate of Competence

If an applicant for an A-grade Tunnel Manager Certificate of Competence intends to **work in an operation that uses explosives**, they must apply separately to have the additional requirements for this type of work added to their Certificate of Competence. They must first complete the additional unit standards below:

UNIT STANDARDS FOR ADDITIONAL REQUIREMENTS – WORK IN AN OPERATION USING EXPLOSIVES	
17694	Demonstrate knowledge of explosives and their properties
21152	Demonstrate and apply knowledge of storing explosives for use

B-grade Tunnel Manager

UNIT STANDARD NUMBER	TITLE
7142 or 28742	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site, or Explain legislation related to health and safety, and supporting documents, applicable to an extractive site
7143	Inspect and report on safety and operations at an extractive site
7146	Demonstrate basic knowledge and ability required to work in an underground operation
16686	Conduct an incident investigation at an extractive site
17691	Use mathematics to solve problems in an extractive industries workplace
19522	Undertake job safety analysis
21278	Describe, install, and reassess support systems for an underground operation
21661	Demonstrate knowledge of the use of electrical reticulation plant and equipment in extractive operations
21821	Maintain and install services for an underground operation
22057	Demonstrate knowledge of pneumatic and hydraulic power systems used in extractive operations
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
26855	Analyse Human Factors present in workplace practices at an extractive site
28983	Carry out the risk management process at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System
30905	Demonstrate knowledge of the Underground Mines Emergency Protocol
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System
FIRST AID UNIT STANDARDS	
6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

Additional requirements for a B-grade Tunnel Manager Certificate of Competence

If an applicant for a B-grade Tunnel Manager Certificate of Competence intends to work in an operation that uses explosives, they must apply separately to have the additional requirements for this type of work added to their Certificate of Competence. They must first complete the additional unit standards below:

UNIT STANDARDS FOR ADDITIONAL REQUIREMENTS - WORK IN AN OPERATION USING EXPLOSIVES	
17694	Demonstrate knowledge of explosives and their properties
21152	Demonstrate and apply knowledge of storing explosives for use

Coal Mine Underviewer

UNIT STANDARD NUMBER	TITLE
7142	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site
7143	Inspect and report on safety and operations at an extractive site
7145	Design and maintain effective ventilation systems for an underground coal mine
7146	Demonstrate basic knowledge and ability required to work in an underground operation
15666	Demonstrate knowledge of geology for underground extraction
16686	Conduct an incident investigation at an extractive site
17691	Use mathematics to solve problems in an extractive industries workplace
17694	Demonstrate knowledge of explosives and their properties
17743	Demonstrate knowledge of survey principles and apply to an extraction site
17744	Read and interpret extractive site plans
19522	Undertake job safety analysis
21151	Demonstrate knowledge of planning rehabilitation operations for an extractive site
21152	Demonstrate and apply knowledge of storing explosives for use
21155	Demonstrate knowledge of the management and use of water at an extractive site
21278	Describe, install, and reassess support systems for an underground operation
21281	Test for gases, interpret findings, and demonstrate knowledge of follow-up actions in an underground coal mine
21629	Evaluate plans to manage old workings and inundations at extractive sites
21661	Demonstrate knowledge of the use of electrical reticulation plant and equipment in extractive operations
21662	Demonstrate knowledge of development and extraction plant and methods for underground coal mining
21821	Maintain and install services for an underground operation
22057	Demonstrate knowledge of pneumatic and hydraulic power systems used in extractive operations
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
26855	Analyse Human Factors present in workplace practices at an extractive site
28983	Carry out the risk management process at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System
30904	Demonstrate knowledge of mining methods, and analyse and select plant for underground coal mines
30905	Demonstrate knowledge of the Underground Mines Emergency Protocol
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System
32283	Explain hazards and controls associated with stockpiling and tip heads at extractive sites
FIRST AID UNIT STANDARDS	
6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

Coal Mine Deputy

UNIT STANDARD NUMBER	TITLE
7142 or 28742	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site, or Explain legislation related to health and safety, and supporting documents, applicable to an extractive site
7143	Inspect and report on safety and operations at an extractive site
7146	Demonstrate basic knowledge and ability required to work in an underground operation
16686	Conduct an incident investigation at an extractive site
17691	Use mathematics to solve problems in an extractive industries workplace
17694	Demonstrate knowledge of explosives and their properties
17705	Describe, develop, and maintain basic ventilation systems for an underground coal mine
19522	Undertake job safety analysis
21152	Demonstrate and apply knowledge of storing explosives for use
21278	Describe, install, and reassess support systems for an underground operation
21281	Test for gases, interpret findings, and demonstrate knowledge of follow-up actions in an underground coal mine
21629	Evaluate plans to manage old workings and inundations at extractive sites
21661	Demonstrate knowledge of the use of electrical reticulation plant and equipment in extractive operations
21662	Demonstrate knowledge of development and extraction plant and methods for underground coal mining
21821	Maintain and install services for an underground operation
22057	Demonstrate knowledge of pneumatic and hydraulic power systems used in extractive operations
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
26855	Analyse Human Factors present in workplace practices at an extractive site
28983	Carry out the risk management process at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System
30905	Demonstrate knowledge of the Underground Mines Emergency Protocol
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System
32283	Explain hazards and controls associated with stockpiling and tip heads at extractive sites
FIRST AID UNIT STANDARDS	
6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

Gas Monitor

UNIT STANDARD NUMBER	TITLE
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
FIRST AID UNIT STANDARDS	
6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

Electrical superintendent

UNIT STANDARD NUMBER	TITLE
7142 or 28742	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site, or Explain legislation related to health and safety, and supporting documents, applicable to an extractive site
7146	Demonstrate basic knowledge and ability required to work in an underground operation
16686	Conduct an incident investigation at an extractive site
17744	Read and interpret extractive site plans
19522	Undertake job safety analysis
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
26855	Analyse Human Factors present in workplace practices at an extractive site
28982	Develop standard operating procedures for an extractive site
28983	Carry out the risk management process at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System
30905	Demonstrate knowledge of the Underground Mines Emergency Protocol
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System

1. The applicant must:

- a. hold a New Zealand qualification as an electrician (trade); a national qualification in electrical engineering; or a qualification in electrical engineering, acceptable to the Board, that is recognised by the New Zealand Qualifications Authority (NZQA) as equivalent to a New Zealand national qualification in electrical engineering, **and**
- b. hold a current practicing licence for electrical work and an endorsed mining registration under the Electricity Act 1992, **and**
- c. satisfy the Board that he or she has at least three years' work experience acceptable to the Board in the extractives industry or heavy industry.

or

2. The applicant must:

- a. hold a degree in electrical engineering conferred by a New Zealand university or by another university acceptable to the Board; or hold a qualification in electrical engineering, acceptable to the Board, that is recognised by the New Zealand Qualifications Authority (NZQA) as equivalent to a four-year bachelor's degree in electrical engineering, **and**
- b. satisfy the Board that he or she has at least 12 months' work experience acceptable to the Board in the extractives industry or heavy industry.

FIRST AID UNIT STANDARDS

6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

Mechanical superintendent

UNIT STANDARD NUMBER	TITLE
7142 or 28742	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site, or Explain legislation related to health and safety, and supporting documents, applicable to an extractive site
7146	Demonstrate basic knowledge and ability required to work in an underground operation
16686	Conduct an incident investigation at an extractive site
17744	Read and interpret extractive site plans
19522	Undertake job safety analysis
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
26855	Analyse Human Factors present in workplace practices at an extractive site
28982	Develop standard operating procedures for an extractive site
28983	Carry out the risk management process at an extractive site
29553	Demonstrate operational knowledge of New Zealand's Coordinated Incident Management System functions and structure
29554	Apply operational knowledge of New Zealand's Coordinated Incident Management System
30905	Demonstrate knowledge of the Underground Mines Emergency Protocol
32158	Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System

1. The applicant must:

- a. hold a New Zealand certificate in mechanical engineering (trade); a national qualification in mechanical engineering, acceptable to the Board; or a qualification in mechanical engineering, acceptable to the Board, that is recognised by the New Zealand Qualifications Authority (NZQA) as equivalent to a New Zealand national qualification in mechanical engineering, **and**
- b. satisfy the Board that he or she has at least three years' work experience acceptable to the Board in the extractives industry or heavy industry.

or

2. The applicant must:

- a. hold a degree in mechanical engineering conferred by a New Zealand university; or a qualification in mechanical engineering, acceptable to the Board, that is recognised by the New Zealand Qualifications Authority (NZQA) as equivalent to a four-year bachelor's degree in mechanical engineering, **and**
- b. satisfy the Board that he or she has at least 12 months' work experience acceptable to the Board in the extractives industry or heavy industry.

FIRST AID UNIT STANDARDS

6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

Mine Surveyor

UNIT STANDARD NUMBER	TITLE
7142 or 28742	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site, or Explain legislation related to health and safety, and supporting documents, applicable to an extractive site
15665	Demonstrate knowledge of geology and geotechnical features and failures for surface extraction
17696	Describe and apply basic skills and knowledge required to work at a surface extraction site
21629	Evaluate plans to manage old workings and inundations at extractive sites
29087	Survey and produce statutory mine plans

The applicant must have:

- a. one of the following qualifications: a New Zealand Diploma in Surveying; a degree in surveying; or a qualification in surveying, acceptable to the Board, that is recognised by the New Zealand Qualifications Authority (NZQA) as equivalent to a New Zealand diploma or degree in surveying (level 6 or higher), **and**
- b. at least three years' work experience in surveying, including 12 months' work experience surveying in the extractives industry.

If the applicant intends to work underground, they must have at least 12 months surveying in the underground workings of a mining operation or tunnelling operation. They must also complete some additional unit standards and apply to have the additional requirements added to their Certificate of Competence (refer below).

FIRST AID UNIT STANDARDS

6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

Additional requirements for a Mine Surveyor Certificate of Competence

If an applicant for a Mine Surveyor Certificate of Competence intends to **work underground**, they must apply separately to have the additional requirements for this type of work added to their Certificate of Competence. They must first complete the additional unit standards below:

UNIT STANDARDS FOR ADDITIONAL REQUIREMENTS – WORK IN AN OPERATION USING EXPLOSIVES

7146	Demonstrate basic knowledge and ability required to work in an underground operation
15666	Demonstrate knowledge of geology for underground extraction
17741	Demonstrate specialist underground survey techniques

Ventilation Officer

UNIT STANDARD NUMBER	TITLE
7142 or 28742	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site, or Explain legislation related to health and safety, and supporting documents, applicable to an extractive site
7146	Demonstrate basic knowledge and ability required to work in an underground operation
17691	Use mathematics to solve problems in an extractive industries workplace
17744	Read and interpret extractive site plans
21821	Maintain and install services for an underground operation
23648	Demonstrate knowledge of and follow safe working practices at an extractive site
FIRST AID UNIT STANDARDS	
6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

Additional requirements for a Ventilation Officer Certificate of Competence

If an applicant for a Ventilation Officer Certificate of Competence intends to **work in an operation involving coal extraction**, they must apply separately to have the additional requirements for this type of work added to their Certificate of Competence. They must first complete the additional unit standards below:

UNIT STANDARDS FOR ADDITIONAL REQUIREMENTS - WORK IN AN OPERATION USING EXPLOSIVES	
7145	Design and maintain effective ventilation systems for an underground coal mine
21280	Demonstrate knowledge and evaluate the design of an effective ventilation system in an underground mine

Winding Engine Driver

UNIT STANDARD NUMBER	TITLE
7164	Describe and operate a winding engine in an underground extractive site
23648	Demonstrate knowledge of and follow safe working practices at an extractive site

The applicant must satisfy the Board that they have the ability to operate a winder and respond to standard industry signals.

FIRST AID UNIT STANDARDS

6400	Manage first aid in an emergency situation
6401	Provide first aid
6402	Provide basic life support

Expiry and replacement of unit standards

- a. If an applicant is required to pass a unit standard specified in this document and it expires or is replaced with a new unit standard (as verified by the New Zealand Qualifications Authority (NZQA)), the applicant may pass either the unit standard specified or the replacement unit standard.
- b. If a unit standard specified in this document is a replacement of a unit standard that has expired (as verified by the NZQA), an applicant who has passed the expired unit standard will be treated as having passed the unit standard specified in this document.

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