

Field Engineering and Technology**Review and Rollover and Revision of *Extractive Industries* unit standards**

Subfield	Domain	ID
Extractive Industries	Extractive Industries Management	7142, 7143, 8899, 8902, 15658, 15660, 15672, 17693, 17744, 21823, 23648, 23649, 25877 , 25878, 28742
	Surface Extraction	8905, 15663, 15665, 15667, 21155
	Underground Extraction	7145, 15662, 15668, 15669, 15670, 17705, 21281, 21629, 21661, 22057

MITO New Zealand Incorporated (MITO) has completed the review of the standards above. The unit standard in **bold** was rolled over and revised only.

Date new versions published

February 2018

Planned review date

December 2022

Summary

The review of these standards was triggered by, and undertaken alongside, WorkSafe New Zealand's review of its requirements for the Extractive Industry's Certificates of Competence (CoCs).

MITO convened a group of Subject Matter Experts to review the standards. This group considered feedback from the New Zealand Mining Board of Examiners. In addition, feedback from stakeholders was gathered through an open consultation process and used to guide the development and review process.

Main changes

- Five standards were moved to the *Extractive Industries Management* domain, and their content was amended, so that they can be used by more than one sector.
- Purpose statements, prerequisites, guidance information, outcomes, performance criteria, and range statements were checked and updated to ensure they are fit for purpose and to ensure clarity for users.
- The titles of 11 standards were amended to reflect changes made.
- The level and credits for standard 15663 were amended to reflect the changes to content.
- Nine standards were designated expiring and replaced by six new standards.
- Four new standards were developed.
- 25877 was rolled over and revised to update legislation and references.

Category C unit standards will expire at the end of December 2019

The last date for assessment of superseded versions of Category B unit standards is December 2019

Impact on existing organisations with consent to assess

Current consent for			Consent extended to		
Nature of consent	Classification or ID	Level	Nature of consent	Classification or ID	Level
Domain	Surface Extraction	4-6	Standards	8905	3
				21155	4
				30902	5
Domain	Underground Extraction	6	Standards	21629	5
				21661	4
				22057	4
				30903	6
				30904	6

Detailed list of unit standards – classification, title, level, and credits

All changes are in **bold**.

Key to review category	
A	Dates changed, but no other changes are made - the new version of the standard carries the same ID and a new version number
B	Changes made, but the overall outcome remains the same - the new version of the standard carries the same ID and a new version number
C	Major changes that necessitate the registration of a replacement standard with a new ID
D	Standard will expire and not be replaced

Reviewed unit standards

Engineering and Technology > Extractive Industries > Extractive Industries Management

ID	Title	Level	Credit	Review Category
7142	Demonstrate knowledge of the application of regulatory requirements to manage an extractive site	6	25	B
7143	Inspect and report on safety and operations at an extractive site	5	10	B
8899	Operate and maintain stockpile storage for product processed at extractive sites	4	8	C
31091	Operate and maintain stockpiles and tip heads at extractive sites	4	8	
8902	Prepare a safety inspection plan for extractive operations	5	4	B
15672	Demonstrate knowledge of the Mines Rescue Service	2	2	C
30905	Demonstrate knowledge of the Underground Mines Emergency Protocol	2	2	
17693	Explain and determine water flow, and describe the selection of pumps and structures for an extractive site	6	20	B
17744	Read and interpret an extractive site plan Read and interpret extractive site plans	4	5	B
23648	Demonstrate knowledge of and follow safe working practices at an extractive site	3	5	B

ID	Title	Level	Credit	Review Category
23649	Develop, implement, and review maintenance plans for an extractive site	6	20	B
25878	Demonstrate knowledge of crushing and screening plant for extractive industries	3	3	C
31092	Demonstrate knowledge of conveyors, and crushing and screening plant for extractive industries	3	5	
28742	Explain the health and safety legislation, and supporting documents, applicable to an extractive site Explain legislation related to health and safety, and supporting documents, applicable to an extractive site	4	8	B

Engineering and Technology > Extractive Industries

ID	Domain	Title	Level	Credit	Review Category
8905	Surface Extraction Extractive Industries Management	Demonstrate knowledge of construction and maintenance of roads within a surface extraction site Demonstrate knowledge of construction and maintenance of working surfaces at an extractive site	3	5	B
15658	Extractive Industries Management	Demonstrate knowledge of the selection of excavation and transportation plant and equipment for surface extraction	5	8	C
15667	Surface Extraction	Demonstrate knowledge of surface extraction methods and the effects of geological features on these methods	5	10	C
30902	Extractive Industries Management	Demonstrate knowledge of extraction methods, and selection of plant and equipment for surface extraction	5	15	
15660	Extractive Industries Management	Analyse and select mining and transportation plant for a metalliferous underground extractive site	6	15	C
15670	Underground Extraction	Demonstrate knowledge of mining methods for metalliferous mines	6	20	C
30903	Extractive Industries Management	Demonstrate knowledge of mining methods, and analyse and select plant for metalliferous underground extraction	6	20	

ID	Domain	Title	Level	Credit	Review Category
15668	Underground Extraction	Demonstrate knowledge of mining methods for underground coal	6	20	C
21823	Extractive Industries Management	Analyse and select mining and transportation plant for underground coalmines	6	15	C
30904	Extractive Industries Management	Demonstrate knowledge of mining methods, and analyse and select plant for underground coalmines	6	20	
21155	Surface Extraction Extractive Industries Management	Demonstrate and apply knowledge of the use of water at a surface extraction site Demonstrate knowledge of the management and use of water at an extractive site	4	7	B
21629	Underground Extraction Extractive Industries Management	Evaluate plans to manage old workings and inundations in underground sites Evaluate plans to manage old workings and inundations at extractive sites	5	10	B
21661	Underground Extraction Extractive Industries Management	Demonstrate knowledge of the use of electrical reticulation plant and equipment in underground operations Demonstrate knowledge of the use of electrical reticulation plant and equipment in extractive operations	4	7	B
22057	Underground Extraction Extractive Industries Management	Demonstrate knowledge of pneumatic and hydraulic power systems used in underground operations Demonstrate knowledge of pneumatic and hydraulic power systems used in extractive operations	4	7	B

Engineering and Technology > Extractive Industries > Surface Extraction

ID	Title	Level	Credit	Review Category
15663	Demonstrate knowledge of the design and maintenance of stockpiles and sloping surfaces at surface extraction sites	6	20	B
	Demonstrate knowledge of the geotechnical requirements for ground stability at surface extraction sites	5	15	

ID	Title	Level	Credit	Review Category
15665	Demonstrate knowledge of the geology of surface extraction Demonstrate knowledge of geology and geotechnical features and failures for surface extraction	4	5	B
30901	Read and interpret a quarry site plan	3	3	New

Engineering and Technology > Extractive Industries > Underground Extraction

ID	Title	Level	Credit	Review Category
7145	Design and maintain effective ventilation systems for an underground operation Design and maintain effective ventilation systems for an underground coal mine	5	20	B
15662	Evaluate ground conditions and demonstrate knowledge of design of support methods for underground operations Evaluate ground conditions and support methods for maintaining stability in underground operations	6	15	B
15669	Demonstrate knowledge of tunnelling methods Demonstrate knowledge of tunnelling methods, and selection of plant and equipment for tunnelling	5	15	B
17705	Describe, develop, and maintain basic ventilation systems for an underground operation Describe, develop, and maintain basic ventilation systems for an underground coal mine	4	15	B
21281	Interpret and test for gases in an underground extraction site Test for gases, interpret findings, and demonstrate knowledge of follow-up actions in an underground coal mine	4	15	B
30898	Design and maintain effective ventilation systems for a non-coal underground operation	5	20	New
30899	Describe, develop, and maintain basic ventilation systems for a non-coal underground operation	4	15	New
30900	Test for gases, interpret findings, and demonstrate knowledge of follow-up actions in a non-coal underground operation	4	15	New