



Australian Government

RIICTC303E Excavate tunnel by machine

Release: 2

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Modification History

Release	Comments
Release 2	This version was released with RII Resources and Infrastructure Industry Training Package Version 7.1. This release made editorial corrections to Knowledge Evidence.
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to excavate tunnel by machine in civil construction, including incorporating dust suppression methods, removing excess water and controlling mucking.

It applies to those working in operational roles. They generally work under minimal supervision to undertake a broad range of tasks in varied work contexts, using some discretion and judgement in selecting equipment, services or contingency measures.

Licensing, legislative and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Users must check requirements with relevant body before applying the unit.

Unit Sector

Civil construction

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and prepare to excavate tunnel by machine	1.1 Obtain, interpret, clarify and confirm work instructions 1.2 Access, interpret and apply documentation required to excavate tunnels by machine and confirm work activity is compliant 1.3 Confirm and identify requirements for complying with environmental protection, safety and traffic management signage requirements

ELEMENT	PERFORMANCE CRITERIA
	1.4 Select equipment and tools required for work activities and check for faults 1.5 Select and wear personal protective equipment according to site requirements 1.6 Identify and address potential risks, hazards and environmental issues, and implement control measures within scope of own role 1.7 Obtain and interpret emergency procedures and identify steps required to respond to emergencies
2. Set up for machine operation	2.1 Devise and follow production schedules consistent with job requirements 2.2 Locate and set up machine and equipment according to job requirements 2.3 Carry out pre-start, start-up, park up, shutdown and secure equipment procedures 2.4 Adjust machine and attachments for terrain, rock and ground conditions 2.5 Drive, operate machine and use controls according to job requirements 2.6 Complete operator maintenance and servicing of machine and equipment to schedule according to manufacturer specifications and site requirements
3. Excavate tunnel and control dust and water	3.1 Excavate tunnel to shape required by specification according to line levels and measurements 3.2 Incorporate dust suppression methods with machine cutting operations to control dust 3.3 Operate and maintain dust extraction systems during excavation 3.4 Remove excess water by operating pumping or drainage system to maintain minimal surface water levels
4. Control mucking	4.1 Set up and align mucking system to spoil system according to job requirements 4.2 Operate mucking attachments according to job requirements 4.3 Maintain dust extraction system in operation along conveyor or mucking system 4.4 Remove spoil according to planned operating procedures 4.5 Direct trucks safely to and from mucking area according to job requirements
5. Conduct clean-up activities	5.1 Clear work area and dispose of or recycle materials according to site requirements 5.2 Clean, check, perform maintenance on and store plant, tools and equipment according to manufacturer specifications and site requirements

ELEMENT	PERFORMANCE CRITERIA
	5.3 Carry out housekeeping activities according to site requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Numeracy	Calculates basic measurements including mass and dimensions
Self-management	Monitors and minimises own exposure to worksite risks and hazards during work activities
Writing	Completes documentation using sector specific vocabulary, grammatical structures and conventions

Unit Mapping Information

Supersedes and is equivalent to RIICTC303D Excavate tunnel by machine.

Links

Companion Volume Implementation Guides are available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>