



Australian Government

Department of Education, Employment and Workplace Relations

RIIMPO303A Conduct rope shovel operations

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers conducting rope shovel operations in the mining industries. It includes: planning and preparing for operations; Operating the shovel; digging and loading trucks; and conducting housekeeping activities.

Application of the Unit

Rope shovels can be either diesel or electric powered. This unit is appropriate for those working in mobile plant operator roles, at worksites within:

- Coal mining
- Metalliferous mining

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for operations	1.1. Access, interpret and apply compliance documentation relevant to conducting rope shovel operations 1.2. Receive, interpret and clarify shift changeover details 1.3. Evaluate equipment and/or attachments supplied for suitability for the work to be undertaken, according to job specifications and to maximise efficiency and effectiveness of work activities 1.4. Identify, address and report potential hazards and risks 1.5. Select personal protective equipment appropriate for work activities 1.6. Carry out equipment pre-start checks to ensure equipment is ready for operation 1.7. Comply with environmental requirements 1.8. Position or move cable towers, power lines and/or crossovers to location according to work plan, ensuring safety of operator and other personnel 1.9. Establish and maintain communication with other personnel using approved communication methods 1.10. Follow emergency procedures to ensure safety of personnel and plant
2. Operate shovel	2.1. Start shovel to manufacturer's operational requirements 2.2. Warm up and exercise shovel and associated equipment, and check controls and instruments for correct functioning 2.3. Interpret instruments and alarms and take appropriate action in response 2.4. Operate shovel smoothly, with correct reach angle to allow optimum efficiency and bucket load, and minimise overload or strain on shovel 2.5. Position shovel for safe, efficient extraction
3. Dig and load trucks with electric rope shovel	3.1. Position and set up shovel for safe, efficient digging

	3.2. Determine and maintain depth of bench to allow optimum use of bucket capacity 3.3. Set and monitor bucket penetration for optimum bucket load and to minimise overload or strain on shovel 3.4. Walk shovel and re-position shovel, power lines and cable towers for safe and efficient operation 3.5. Communicate with and directs truck positioning for safe loading operation 3.6. Load material on truck so that bucket clears side of truck and is not swung over truck cabin, material is placed in the centre of tray and does not exceed truck load limit 3.7. Check surrounding area and re-position shovel in regard to other operations personnel, to meet digging requirements 3.8. Keep floor clear and level and removes spillages 3.9. Park shovel in safe area, on flat, level ground at end of shift
4. Conduct housekeeping activities	4.1. Clean equipment to site requirements 4.2. Clean and store attachments and other ancillary equipment ready for further use 4.3. Complete all required records and documentation accurately and promptly

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

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 conduct rope shovel operations:

- apply legislative, organisation and site requirements and procedures
- apply diagnostic techniques
- apply hazardous goods handling techniques
- interpret plans, reports, maps, specifications
- apply lifting techniques
- organise work tasks
- work in a team

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 conduct rope shovel operations:

- electric rope shovel operating principles and practices
- breakdown procedures
- emergency procedures
- equipment processes, technical capability and limitations
- equipment safety requirements
- geological and technical data
- fatigue management
- hauling procedures
- hazardous goods procedures and consequences of spills
- isolation procedures
- mine operational system
- night and day working procedures
- OHS procedures
- open cut procedures
- operational procedures and checks
- road rules
- shutdown procedures
- site safety requirements
- start-up procedures
- towing procedures

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
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 conducting rope shovel operations • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of rope shovel operations • working with others to undertake and complete rope shovel operations that meet all of the required outcomes • consistent timely completion of rope shovel operations that safely, effectively and efficiently meets the required outcomes
Context of and specific resources for assessment	• 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. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second

	language issues. • Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with disabilities. • Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	This unit may be assessed in a holistic way with other units of competency. 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 requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistently achieving the required outcomes • first hand testimonial evidence of the candidate's: • working with others to undertake and complete the rope shovel operations
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. 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) may also be included.

Relevant compliance documentation may include:	• legislative, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • codes of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Potential hazards and risks may include:	• abandoned equipment • adjoining pit walls • adverse weather conditions (electrical storms, floods, fires) • chemicals • contaminants • equipment • fences • holes • materials • over-hanging rocks • personnel • pot holes • unsafe ground • unstable faces • vehicles • stored energy which may include: • engine components • radiators and cooling systems • hydraulic tanks and reservoirs • air tanks and reservoirs • hydraulic hoses • air hoses • tires • air conditioning components

	• electrical components • braking systems • centrifugal forces
Pre-start checks may include:	• air filter restriction indicator • cab (horn, lights, air conditioner) • computer systems • display instrumentation and gauges (indicators, gauges, laser levels) • electric motor run lights • fluid levels (windscreen washer tank, hydraulic oil, grease, gearbox oil) • visual and audio warning devices and lights
Environmental requirements may include:	• culturally-sensitive sites and artefacts • drainage • dust • emissions • flora and fauna • hazardous chemicals • heritage legislation • noise • runoff • spills • water quality
Emergency procedures may include:	• clean up • equipment shutdown procedures • evacuation procedures • First Aid • isolation procedures • notification of authorities • use of personal protective equipment
Capacity of equipment and/or attachments may include:	• duration of operation • efficient and safe operating speed • operating limitations • type of activities performed • weight and/or load limitations
Loading face characteristics may include:	• stable • unstable
Material may include:	• gravel • ore • overburden • oxidised waste

	• rejects • road base • rubbish • sand • sulphide rock fill • tailings • topsoil • water
Cleaning methods may include:	• degreasing • forced air • steam cleaning • vacuum • water

Unit Sector(s)

Mobile Plant Operations

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.