



Australian Government

Department of Education, Employment and Workplace Relations

RIIMCU205A Conduct rotational drilling

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the conduct of rotational drilling in the coal industry. It includes: planning and preparing for operations, operating drilling equipment, and carrying out operator maintenance. Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between States, Territories, and industry sectors. Relevant information must be sourced prior to application of the unit.

Application of the Unit

This unit is appropriate for those working in an assistant role at worksites within:

- Coal 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 the work activity 1.2. Obtain, interpret and clarify/confirm work requirements in the form of shift briefings, handover details or work orders before proceeding 1.3. Access, interpret and apply mine environmental geological and survey data required to complete the allocated work in accordance with site procedures 1.4. Obtain, transport and prepare materials and resources required for the work in accordance with manufacturer and/or site requirements and legislative requirements 1.5. Prepare worksite and equipment in accordance with site requirements
2. Operate drilling equipment	2.1. Resolve coordination activities with others at the site prior to commencement of, and during, the work activity 2.2. Carry out pre-start, start-up and shutdown procedures in accordance with manufacturer's instructions and/or site procedures 2.3. Operate drilling equipment in accordance with manufacturer's instructions and/or site specific instructions to carry out the function of rotary drilling 2.4. Record and report findings and anomalies in accordance with site specific requirements 2.5. Recognise and respond to emergency and hazardous situations in accordance with manufacturer's instructions and/or site procedures
3. Carry out operator maintenance	3.1. Carry out drilling equipment inspections and fault finding in accordance with manufacturer's instructions and/or site requirements 3.2. Carry out drilling equipment inspections and fault finding in accordance with manufacturer's instructions and/or site

	requirements 3.3. Carry out minor maintenance to manufacturer's instructions and/or site requirements 3.4. Provide operator support during preparation for, and conduct of, major maintenance tasks in accordance with site requirements 3.5. Process records in accordance with site requirements
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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 of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes the ability to carry out the following, as required to conduct rotational drilling:

- apply legislative, organisation and site requirements and procedures for the conduct of rotational drilling
- apply operational safety requirements
- read, interpret and apply technical information
- isolate and tag
- install, maintain and recover drilling equipment
- apply geological and survey data
- identify hazards and potential hazards
- read gas detection equipment
- apply emergency procedures
- identify defects and damage
- maintain records and reports
- comply with environmental requirements

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes knowledge of the following, as required to conduct rotational drilling:

- site operational safety procedures
- site drilling operations
- drilling equipment characteristics and limitations
- isolation and tagging procedures
- mine gases
- outburst phenomena
- ventilation principles
- geological and survey data
- down hole survey and logging
- visual inspection procedures
- site drilling equipment maintenance systems and procedures
- recording and reporting
- site environmental requirements and constraints related to drilling

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 rotational drilling • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of rotational drilling operations • working with others to undertake and complete the rotational drilling in a way that meets all of the required outcomes • consistent timely completion of rotational drilling 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. • 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. • 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. • 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 • consistent achievement of required outcomes • first hand testimonial evidence of the candidate's: • working with others to undertake and complete the rotational drilling 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, organisational and site requirements and procedures • manufacturer's guidelines and specifications • management plans • OHS policy • Australian standards • code of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Work requirements may be in the form of:	• shift briefings • handover details • work orders
Nature and scope of work includes:	• sequencing of operations • achievement targets • locations and essential survey information • working conditions • geological conditions • hazard • potential hazards • coordination requirements/issues
Mine environmental, geological and survey data may be in the form of:	• ventilation/gas data • deputy reports • geological hazard plan • longitudinal and cross sectional survey plans
Site requirements may include:	• SOPs • work instructions
Drilling may be for:	• geological exploration • old workings • water • gas
Rotary drilling may include:	• collaring • reaming

	• drilling • coring • core recovery • rod retrieval • standpiping • connecting hose to suction • monitoring suction
Drill power types may be:	• electric • air • hydraulic
Hazardous situations may include:	• pollution of work station by release of seam gas • rotating parts • ejection of material from hole • inrush • rod ejection
Records may include:	• logs • work completed • equipment defects and requirements
Operator (operational) maintenance procedures are those established and authorised for the site.	

Unit Sector(s)

Coal Mining (Underground)

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.