



Australian Government

Department of Education, Employment and Workplace Relations

RIIBHD304A Set up and prepare for open-cut drilling operations

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers setting-up and preparing for open cut drilling operations in the mining and extractive industries. It includes: preparing the drilling site; marking out drill pattern; and moving equipment and materials to pattern.

Application of the Unit

This unit is appropriate for those working in a operational roles, at worksites within:

- Coal mining
- Extractive industries
- 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. Prepare drilling site	1.1. Access, interpret and apply compliance documentation relevant to the setting-up and preparing for open cut drilling operations 1.2. Receive, interpret and clarify shift changeover details 1.3. Identify, manage and report potential hazards and risks according to work plan 1.4. Select personal protective equipment appropriate for work activities 1.5. Conduct equipment pre-start checks to ensure equipment is ready for operation 1.6. Assess site conditions and historical information of past performance to determine and clarify drilling requirements 1.7. Locate and connect ancillary services 1.8. Stabilise drill to minimise delays and breakdowns and ensure safety of operating personnel and continuous drilling 1.9. Communicate with other personnel using approved communication methods 1.10. Adhere to emergency procedures to ensure safety of personnel, plant and equipment
2. Mark out drill pattern	2.1. Erect physical barricades and signage to protect pattern from unauthorised personnel and equipment 2.2. Adjust drill pattern within authorised tolerances and drill pattern 2.3. Obtain authorisation for changes to drill pattern plan from relevant authority 2.4. Place indicators on drill pattern in preparation for hole drilling 2.5. Mark out drill pattern ensuring it is visible and aids the drilling process 2.6. Protect pre-existing drill holes according to characteristics of hole 2.7. Complete all required documentation clearly, concisely and on time
3. Move equipment and materials	3.1. Rigged and in readiness for moving

to pattern	3.2. Determine route and destination prior to movement of equipment and materials 3.3. Identify and manage potential hazards to ensure safe transportation to drill site 3.4. Move equipment and attachments safely and avoid damage to equipment and site or injury to personnel 3.5. Align drill rig in appropriate position to access drill pattern efficiently 3.6. Connect ancillary services
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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 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 set-up and prepare for open cut drilling operations:

- apply legislative, organisation and site requirements and procedures
- apply diagnostic techniques
- apply blasting techniques
- make decisions
- direct operations
- apply drilling techniques
- apply driving techniques
- identify hazards
- handle hazardous goods
- interpret plans, reports, maps, specifications
- apply lifting techniques (manual, cranes and loads)
- maintain records
- organise work tasks
- report defects
- apply safe work practices
- select and fit personal protective equipment
- work in a team
- troubleshoot
- use communications equipment
- use hand tools

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 set-up and prepare for open cut drilling operations:

- blasting procedures
- breakdown procedures
- drilling pattern marking procedures
- drilling procedures
- emergency procedures
- environmental and heritage procedures
- equipment processes, technical capability and limitations

- equipment safety requirements
- geological and technical data
- 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 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 setting-up and preparing for open cut drilling operations • implementation of requirements, procedures and techniques for the safe, effective and efficient setting-up and preparing for open cut drilling operations • working with others to set-up and prepare for open cut drilling operations that meet all of the required outcomes • consistent timely completion of setting-up and preparing for open cut 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. • 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 set-up and prepare for open cut 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, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • code 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
Pre-start checks may include:	• air filter restriction indicator • cab (horn, lights, air conditioner) • display instrumentation and gauges (indicators, gauges, laser levels), computer systems • engine and stop engine lights (orange and red) • fluid levels (windscreen washer tank, hydraulic oil, coolant, grease, water, engine oil, fuel) • visual and audio warning devices and lights

Site conditions may include:	• wet and dry • day and night • broken ground • stable ground (compaction) amount of scale • slope of working surface • degree of compaction • location of water table • working over old underground workings and voids
Materials may include:	• gravel • ore • oxidised waste • rejects • road base • rubbish • sand • sulphide rock fill • tailings • topsoil • water

Unit Sector(s)

Blast Hole Drilling

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.