



Australian Government

Department of Education, Employment and Workplace Relations

RIIPGP201A Conduct pump operations

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the conduct of pump operations in the metalliferous mining industry. It includes planning and preparing for pumping operations, pumping material, 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:

- 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

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>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.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for pumping operations	1.1. Access, interpret and apply <i>compliance documentation</i> relevant to the work activity 1.2. Plan and prepare work 1.3. Receive, interpret and clarify shift changeover details 1.4. Identify, address and report <i>potential risks and hazards</i> 1.5. Select personal protective equipment appropriate for work activities 1.6. Conduct equipment <i>pre-start checks</i> 1.7. Identify, address and report <i>environmental issues</i> 1.8. Communicate with other personnel 1.9. Adhere to emergency procedures
2. Pump material	2.1. Carry out start-up and shutdown procedures 2.2. Operate equipment within recommended speed, engine capability and limitations 2.3. Monitor equipment performance utilising appropriate <i>indicators</i> 2.4. Complete work according to agreed work plan and outcomes 2.5. Constantly monitor pressure and flow of material
3. Carry out operator maintenance	3.1. Conduct visual inspection and fault finding 3.2. Conduct routine operational servicing to ensure peak performance of equipment 3.3. <i>Clean equipment</i> 3.4. 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 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 pump operations:

- apply legislative, organisation and site requirements and procedures for conducting pump operations
- maintain, clean and operate equipment
- identify hazards
- handle hazardous goods
- maintain records
- monitor operations
- employ safe work practices
- fault finding
- use communications equipment
- use hand and power tools

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 pump operations:

- emergency procedures
- environmental principles
- equipment processes, technical capability and limitations
- equipment safety requirements
- isolation procedures
- material under pressure
- mine operational system
- occupational health and safety procedures
- operational procedures and checks
- pumping operations
- pumping safety requirements

Evidence Guide

<p>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.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>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:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for conducting pump operations • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of pump operations • working with others to undertake and complete the conduct of pump operations that meets all of the required outcomes • consistent timely completion of pump operations that safely, effectively and efficiently meets the required outcomes
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • 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

	<p>cultural diversity.</p> <ul style="list-style-type: none"> • 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	<p>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:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • working with others to undertake and complete the conduct of pump operations
Guidance information for assessment	<p>Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.</p>

Range Statement

<p>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.</p>	
<p>Relevant compliance documentation may include:</p>	<ul style="list-style-type: none"> • legislative, organisational and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
<p>Pre-operational checks are those checks specified by the manufacturer prior to operating the item of equipment and may include:</p>	<ul style="list-style-type: none"> • computer systems • display instrumentation and gauges (indicators, gauges, laser levels) • pump and componentry • visual and audio warning devices and lights
<p>Capacity of pump may include:</p>	<ul style="list-style-type: none"> • duration of operation • efficient and safe operating speed • operating limitations • pressure limitations • type of activities performed
<p>Indicators may include:</p>	<ul style="list-style-type: none"> • computer indicators
<p>Visual inspection and fault finding may include:</p>	<ul style="list-style-type: none"> • danger tags • fire suppression unit (pins in position in triggers) • light positioning and cleanliness • oil leaks • personnel proximity • portable fire extinguisher (bracket, gauge, hose, ease of access) • stress in pipelines
<p>Equipment cleaning methods may include:</p>	<ul style="list-style-type: none"> • degreasing • forced air • steam cleaning • vacuum • water

<p>Potential risks and hazards may include:</p>	<ul style="list-style-type: none"> • 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
<p>Environmental issues may include:</p>	<ul style="list-style-type: none"> • culturally-sensitive sites and artefacts • drainage • dust • emissions • flora and fauna • hazardous chemicals • heritage legislation • noise • runoff • spills • water quality
<p>Site conditions may include:</p>	<ul style="list-style-type: none"> • broken ground • day and night • degree of compaction • location of water table • slope of working surface • stable ground (compaction) amount of scale • wet and dry • working over old underground workings and voids
<p>Materials in suspension may include:</p>	<ul style="list-style-type: none"> • ore • organic solvents • contaminants • precipitates

Unit Sector(s)

Processing

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.