



Australian Government

Department of Education, Employment and Workplace Relations

RIIPGP302A Monitor and operate auxiliary plant and equipment

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the monitoring and operation of auxiliary plant and equipment in the metalliferous mining industry. It includes preparing for plant equipment monitoring and operation, carrying out plant and equipment inspections and checks, operating and monitoring plant and equipment, maintaining plant and equipment efficiency, and shutting down and/or isolating plant and equipment. 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 operational 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

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 for plant and equipment monitoring and operation	1.1. Access, interpret and apply compliance documentation relevant to the work activity 1.2. Plan and prepare work 1.3. Receive, interpret and clarify shift changeover details 1.4. Establish and maintain communication with other personnel using approved communication methods 1.5. Select personal protective equipment appropriate for work activities 1.6. Carry out equipment pre-start checks 1.7. Identify, address and report potential risks and hazards 1.8. Identify, address and report environmental issues 1.9. Follow emergency procedures 1.10. Use dust suppression and extraction methods
2. Carry out plant and equipment inspections and checks	2.1. Check correct plant operation prior to start-up 2.2. Check condition of plant and equipment for fault, identify damaged and inoperable equipment and report to relevant personnel 2.3. Record check/inspection outcomes and hand over to oncoming shift personnel 2.4. Physically, continuously inspect plant, take equipment indicator readings and identify and rectify defects and potential problems
3. Operate and monitor plant and equipment	3.1. Carry out plant and equipment start-up checks and procedures according to plant/equipment configurations and system requirements 3.2. Monitor operating plant and equipment for correct, efficient performance 3.3. Changeover auxiliary/ancillary plant to meet operational and maintenance requirements 3.4. Interpret and respond to plant alarms, take remedial actions and notify appropriate personnel

	3.5. Identify basic faults and adjustments and make repairs to running/operating plant where necessary to maintain plant performance 3.6. Complete all required documentation clearly, concisely and on time 3.7. Pass on end of shift information to oncoming shift
4. Maintain plant and equipment efficiency	4.1. Carry out plant and equipment <i>maintenance</i> 4.2. Check and adjust plant condition to maintain efficient operation 4.3. Clear pipeline and pumping system blockages 4.4. Maintain materials storage vessel levels to meet plant operating demands 4.5. <i>Clean</i> plant to maintain condition of all equipment and work area hygiene 4.6. Identify and report hazards 4.7. Take and test samples
5. Shutdown and/or isolate plant and equipment	5.1. Carry out plant and equipment shutdown procedures according to plant/equipment configurations, system or safety requirements 5.2. Isolate plant and equipment for maintenance and plant configuration purposes 5.3. Perform post shutdown or isolation checks 5.4. Provide support for maintenance personnel and activities 5.5. Pass on shift change-over details to oncoming shift

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 monitor and operate auxiliary plant and equipment:

- apply legislative, organisation and site requirements and procedures for monitoring and operating auxiliary plant and equipment
- operate auxiliary equipment
- lift loads (manual handling, cranes and loads)
- apply safe work practices
- 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 monitor and operate auxiliary plant and equipment:

- plant configuration and function
- auxiliary equipment configuration and function
- breakdown procedures
- emergency procedures
- troubleshooting techniques
- sampling and testing purpose and procedures
- plant and equipment limitations and operating parameters
- plant and equipment safety requirements
- isolation procedures
- metallurgical processes and effects on product
- occupational health and safety procedures
- operational procedures and checks
- site procedures
- site safety requirements
- environmental requirements and 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 monitoring and operating auxiliary plant and equipment • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of auxiliary plant and equipment monitoring and operation • working with others to undertake and complete the monitoring and operation of auxiliary plant and equipment that meets all of the required outcomes • consistent timely completion of auxiliary plant and equipment monitoring and operation 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 monitoring and operation of auxiliary plant and equipment
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 • Australian standards • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Personal Protective Equipment may include:	• rubber gloves • rubber boots • safety boots • goggles/face shield • PVC overalls and apron • heat jacket • spats • hearing protection • respirator • clean air supply equipment
Pre-start checks may include:	• availability of equipment • detection of conditions that are unusual • job requirements • personnel availability • levels • communications
Environmental issues may include:	• drainage • dust (dump) • emissions • flora and fauna • hazardous chemicals • noise • recycling • run-off/spills • waste management and disposal • water quality

Plant and equipment may include:	• distribution control system (DCS) • motors/pumps and pumping systems • hydraulic systems and equipment • conveyors and conveyor systems • compressors and compressed air systems • pipes and flanges • storage vessels/tanks • valves • heat exchangers • fans and guards • dampers • pulleys • ICUs • drive belts • compressors • burners • gas train • conveyors/conveyor systems • rollers • grates • thickener plant • hand and power tools • hoses (air and water) • scrubbers • gauges and meters • agitators • silos/bins • cranes • screens • feeders • sumps • limit switches
Equipment indicator readings may include:	• current • flow • levels • pressure • speed • unusual noises • vibrations
Start-up checks and procedures may include the inspection of:	• agitators • cameras and monitoring

	• interlocks • distribution control system • launders • hydraulic systems • pumps and pumping systems • screen inspections • pipes and flanges • drive belts • valves • visual and audible warning devices and lights • suppression systems
Monitor may include:	• blockages and spillages • feed rates • overloads • pressures • power draw • wear and tear • emissions (e.g. cyanide) • levels • temperatures • moisture content • on-stream analysis (OSA) • filtering • corrosion
Maintenance may include:	• lubrication • minor adjustments to operational plant • temporary small repairs • cleaning plant, equipment and work area • fixing leaks • adjusting seals
Clean may refer to cleaning methods that may include:	• hosing with water • high pressure cleaning • manual removal of build-up • air spear • de-greasing • forced air • suction

Unit Sector(s)

Processing

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.