



Australian Government

Department of Education, Employment and Workplace Relations

RIIMCP301A Monitor plant operations for coal preparation

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the monitoring of coal preparation plant operations in the coal industry. It includes preparing for plant operations, monitoring preparation processes, and supporting coal preparation processes. 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 technician 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

<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. Prepare for plant operations	1.1. Access, interpret and apply compliance documentation relevant to the work activity 1.2. Locate and identify by name, number and/or code and function all appropriate process equipment and plant 1.3. Carry out pre-start check of all equipment and provide reports to control in accordance with manufacturer and/or site procedures 1.4. Interpret and apply basic mineralogy information required to complete the processes in accordance with site requirements
2. Monitor preparation plant processes	2.1. Identify the limitations and capabilities of plant processes and report detail to control 2.2. Monitor plant processes and pass reports to control 2.3. Monitor the operation of equipment and the use of materials and pass reports to control 2.4. Report and record all information required to maintain coal preparation plant processes in accordance with site procedures
3. Support coal preparation processes	3.1. Note the results of continuous inspections and identify and locate all faults by name, number and/or code and rectify and/or report in accordance with site procedures 3.2. Complete housekeeping duties throughout the worksites 3.3. Carry out operational reporting and complete and process documents in accordance with site requirements

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 coal preparation plant operations:

- apply legislative, organisation and site requirements and procedures for monitoring coal preparation plant operations
- apply operational safety requirements
- access, read, interpret and apply technical information
- identify process equipment and plant
- apply hand-eye coordination
- diagnose faults
- apply preventative control measures
- use relevant hand tools
- prepare and communicate reports
- maintain equipment records
- comply with environmental requirements
- enter basic computer data

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 coal preparation plant operations:

- site and equipment/plant safety requirements
- coal preparation processes
- manual process control techniques
- equipment/plant characteristics, technical capabilities and limitations
- equipment/plant operating procedures
- basic mineralogy related to coal quality
- basic geological and survey data
- relevant chemicals, materials and their environment effects
- Hazchem related to the work area
- site environmental requirements and constraints related to coal plant operations
- recording and reporting procedures
- impact of processes on customer quality 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 the monitoring of coal preparation plant operations • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of coal preparation plant operations monitoring • working with others to undertake and complete the monitoring of coal preparation plant operations in a way that meets all of the required outcomes • consistent timely completion of coal preparation plant operations monitoring 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

	<p>assessment should not be greater than those required on the job.</p> <ul style="list-style-type: none"> • 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	<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 monitoring of coal preparation plant 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>Types of coal may include:</p>	<ul style="list-style-type: none"> • seam • calorific value • size • moisture content • percentage ash • sulphur content • coking • steam
<p>Work requirements may include:</p>	<ul style="list-style-type: none"> • shift briefings • handover details • work orders • consideration of the previous shift report • end product specifications • production results, including tonnages and output tonnages • set points for densities • levels • pressures • breakdown details • availability and location of coal by type • seam • blend • defects, including faults in plant/equipment • maintenance requirement • water availability • charts • print-outs

	<ul style="list-style-type: none"> • logs • amp readings • thickener • tailings • roll stocks
<p>Safety information and procedures may be contained in:</p>	<ul style="list-style-type: none"> • legislation and regulations • relevant Australian standards • management plans • OHS policy • code of practice • manufacturer's instructions • safe working procedures (or equivalent)
<p>Process equipment and plant may include:</p>	<ul style="list-style-type: none"> • crushers • stackers • feeders • reclaimers • drums • samplers • conveyors • pumps and screens • sieve bends • chutes • launders • gates • compressors • magnetic separators • filters • centrifuge • flotation cells • agitators • elevator • thickeners • blowers • breakers • magnets • belts • feeders • jigs • cyclones
<p>Processes to be controlled may include:</p>	<ul style="list-style-type: none"> • sampling • crushing

	<ul style="list-style-type: none"> • screening • jigging • flotation • magnetite recovery • dense media separation • fines recovery • centrifuging • settling and structuring • effluent treatment
Monitoring may include:	<ul style="list-style-type: none"> • ash level • moisture content • size • yield • plant availability • product stock pile • bin capacity • reject percentages • sump levels • density control
Recording and reporting may include:	<ul style="list-style-type: none"> • control room log • computer reports • accident/incident reports • check sheets • pre-shift equipment reports • defect reports • tags • work orders
Shift reports may include:	<ul style="list-style-type: none"> • plant downages • downtime • maintenance requirements • quality information
Information may be transmitted by:	<ul style="list-style-type: none"> • 2-way radio • telephone • PA • verbal • CB • written • computer monitor • printouts
Faults may be identified by:	<ul style="list-style-type: none"> • alarms • indicator lights

	<ul style="list-style-type: none">• amp gauges• computer monitor• camera monitor• visual inspection
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Unit Sector(s)

Coal Mining (Coal Preparation)

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.