



Australian Government

Department of Education, Employment and Workplace Relations

RIISAM602A Establish and maintain maintenance management system for mechanical plant and equipment

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers establishing and maintaining maintenance management systems for mechanical plant and equipment in the coal mining industry. It includes: developing, implementing and monitoring the system; auditing, reviewing and reporting on the system.

Application of the Unit

This unit is appropriate for those working in management or technical specialist roles, in open cut and underground operations 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. Develop the system	1.1. Access, interpret and apply compliance documentation relevant to mechanical plant and equipment maintenance management systems 1.2. Develop maintenance strategy for plant and equipment that meets business and legislative requirements 1.3. Consult with relevant stakeholders 1.4. Develop maintenance system to meet the requirements of the maintenance strategy 1.5. Determine resource requirements, including budget and staffing requirements 1.6. Establish roles and responsibilities 1.7. Allocate and train staff to meet maintenance schedules
2. Implement and monitor the system	2.1. Develop procedures and inspection and maintenance schedules 2.2. Communicate strategy to relevant stakeholders 2.3. Implement maintenance management schedules 2.4. Maintain maintenance records 2.5. Monitor effectiveness of the maintenance management system and workplace practices against objectives, timelines, key performance indicators and regulations 2.6. Monitor compliance with the schedules 2.7. Analyse maintenance reports and system output information 2.8. Identify defective components, sub-assemblies and design faults 2.9. Monitor effective use of resources
3. Audit and review	3.1. Develop and document corrective action plan, based on outcome of monitoring process 3.2. Implement and test modifications 3.3. Document system modifications
4. Report on the system	4.1. Document system in accordance with organisation's guidelines

	4.2. Communicate system to relevant personnel
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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 establish maintenance management system for mechanical plant and equipment:

- apply legislative, organisation and site requirements and procedures
- access, interpret and apply:
 - technical information
 - site / legislative requirements
 - records and reports
 - briefings and handover details
- apply procedures to assess the risks and consequences attached to mechanical systems
- apply processes to develop procedures appropriate to mine operations for management of mechanical maintenance systems
- plan and coordinate work
- apply procedures to manage work in confined spaces
- apply procedures to identify training needs related to mechanical maintenance systems
- interpret manufacturer's instructions
- apply maintenance survey requirements and procedures
- liaise with other parties
- coordinate others
- apply information management systems
- apply mechanical maintenance data analyse processes
- use measuring equipment
- write reports
- facilitate meetings

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 establish maintenance management system for mechanical plant and equipment:

- legislative, Australian standards and site specific requirements including communications, emergency procedures, risk management, recording and reporting, mines rescue, OHS, manufacturer's instructions, standard work procedures, training, fire fighting, handling and storing of dangerous goods, local government and power authority requirements

- mine operating systems and procedures, including transport systems, conveyor systems, systems of mining, ventilation systems, gas management systems and mine water management systems
- stores systems
- protection systems
- reticulation systems
- specifications from mechanical systems
- audit procedures
- mine design issues relating to mechanical systems
- organisation structure
- use of computer based systems relating to mechanical maintenance systems
- workplace training methods
- safety design features for maintenance of mechanical systems
- maintenance surveys
- work role definitions
- reporting methods and alternatives
- community expectations
- consultative strategies
- alternative documentation systems for procedures
- mine equipment

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 the establishing and maintenance of maintenance management system for mechanical plant and equipment • implementation of procedures and techniques for the safe, effective and efficient establishing and maintaining of maintenance management system for mechanical plant and equipment • the identification of the relevant information and scope of the work required to meet the required outcomes • the identification of viable program options and the selection of programs that best meet the required outcomes • working with others to establish and maintain maintenance management system for mechanical plant and equipment • consistent and timely establishing and maintaining of maintenance management system for mechanical plant and equipment
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 procedures and techniques for the safe, effective and efficient achievement of the required outcomes • identification of the relevant information and scope of the work required • identification of viable options and the selection of option that best meet the required outcomes • consistently achieving the required outcomes • first hand testimonial and documentary evidence of the candidate's: • working with others to establishing and maintaining of maintenance management system for mechanical plant and equipment

	• consistent and timely gaining of approval of maintenance management system for mechanical plant and equipment • provision of clear, timely required support and advice on the implementation of maintenance management system for mechanical 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, 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
Maintenance Management System is:	• the overarching combination of processes that is documented in policies, plans, procedures, schedules, audit and recording mechanisms, which determines how maintenance is implemented, controlled, monitored and reviewed at the mine
Maintenance is to restore or keep at the level that it was originally designed to, by:	• inspecting and testing plant and equipment • monitoring plant and equipment • servicing equipment • repairing equipment • overhauling equipment
Maintenance strategy may include:	• minimising risk to people and equipment • defining the actions necessary to meet business and legislative requirements • review of failure modes • manufacturer's requirements
Equipment may include:	• entire item of plant or individual components of the item of plant
Stakeholders may include:	• regulatory authorities • project managers • contractors • client representatives • government authorities • community groups • engineers • architects

	• employees
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Unit Sector(s)

Service and Maintenance

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.