



Australian Government

Department of Education, Employment and Workplace Relations

RIIWMG501A Implement the site water management plan

Release: 1

RIIWMG501A Implement the site water management plan

Modification History

Not applicable.

Unit Descriptor

This unit covers the implementing of the site water management plan in the coal and metalliferous mining and extractive industries. It includes: preparing for development of the plan; prepare the plan; and initiating, monitoring and adjusting the implementation of the plan.

Application of the Unit

This unit is appropriate for those working in management or technical specialist roles, 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 for development of the management plan	<p>1.1. Access, interpret and apply <i>compliance documentation</i> relevant to the implementation of the <i>site water management plans</i></p> <p>1.2. Obtain, review and interpret the site <i>geological, hydrological and survey data</i> relevant to the implementation of the plan</p> <p>1.3. Access, interpret and clarify the organisation's water management systems requirements, where applicable</p>
2. Prepare the management plan	<p>2.1. Involve <i>internal and external stakeholders</i> in the planning process in a way that uses their contribution effectively and gains their support for the outcomes</p> <p>2.2. Develop and document the plan in accordance with operational requirements, the water management system, geological, hydrological and survey data, and requirements and procedures</p> <p>2.3. Develop an emergency response plan should any critical aspect of the mine water management system fail</p> <p>2.4. Identify and acquire the <i>resources</i> required for the implementation of the plan</p> <p>2.5. Identify and arrange any training required for personnel involved in the site water management operations</p> <p>2.6. Prepare and present the site water management operations budget</p>
3. Initiate, monitor and adjust the implementation of the management plan	<p>3.1. Issue and explain the plan to team members and others involved, for the safe, effective and efficient implementation of the plan</p> <p>3.2. Allocate roles and responsibilities and set targets and standards of achievement</p> <p>3.3. Provide timely ongoing support and advise to those implementing the plan</p> <p>3.4. Ensure required records and reports are maintained and issued</p> <p>3.5. Monitor the site water management performance against the organisation and site requirements and the budget; resolve</p>

	anomalies in consultation with relevant stakeholders and issue appropriate instructions for adjustments to the plan and/or its implementation
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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 implement the site water management plan:

- apply legislative, organisation and site requirements and procedures
- interpret legislative and site requirements and procedures
- interpret and apply geological, hydrological and survey data
- provide team leadership
- apply procedures for selecting construction techniques
- apply procedures for selecting and assigning plant and equipment
- apply procedures for selecting development strategies
- apply procedures for developing, initiating and administering work plans
- interpret and apply operational performance data

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 implement the site water management plan:

- site risk, statutory compliance, health, safety, environmental, quality and communication requirements and procedures
- geological, hydrological and survey data
- organisation water management policy, objectives and procedures (where they exist)
- licence or environmental conditions
- site water management development options and procedures
- operational techniques required for execution of the plan
- plant and equipment capabilities
- work planning techniques
- team leadership techniques
- consultative and coaching techniques
- work monitoring methods
- recording and reporting systems
- training systems

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	<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 implementing of the site water management plans • implementation of procedures and techniques for the safe, effective and efficient implementing of the site water management plans • the identification of the relevant information and scope of the work required to meet the required outcomes • the identification of viable options and the selection of options that best meet the required outcomes • working with others to undertake and complete the implementing of the site water management plans • consistent successful implementing of the site water management plans
Context of and specific resources for assessment	<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. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those

	<p>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. • Assessment of this competency requires typical resources normally used in a civil works 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	<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 to apply in undertaking of the implementing of the site water management plans • observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> • 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 to meet the required outcomes • identification of viable options and the selection of options that best meet the required outcomes • consistently achieving the required outcomes • first hand testimonial and documentary evidence of the candidate's: <ul style="list-style-type: none"> • working with others to undertake and

	<p>complete the implementing of the site water management plans</p> <ul style="list-style-type: none">• provision of clear and timely required support and advice on the implementing of the site water management plans
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.

<p>Relevant compliance documentation</p> <p>may include:</p>	<ul style="list-style-type: none"> • 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
<p>Site water management plan</p> <p>should where applicable include:</p>	<ul style="list-style-type: none"> • risk management requirements • occupational health and safety requirements • environmental requirements • specific site water balances for peak and low scenarios • water reuse and recycle opportunities • site specific water recycling processes • site water withdrawals, including; volume and source use in normal and dry weather • adequate pumping capacities to meet current and future production needs • the volume and quality of discharges • clean and contaminated flows segregation • treatment programs for contaminated flows • wastewater volume usage and quality and how and where it should be stored for treatment before discharge • the protection of groundwater sources • existing neighbour water users and respective discharges • surface water resources, including; hydrological data of rivers, streams, lakes and wetlands and present surface water quality data • the quality and potential of ground water regime, local wells and surface water sources • requirements for testing management system for discharge waters, in accordance with

	<p>legislative and organisation's requirements</p> <ul style="list-style-type: none"> contingency plans for flood routing of waters in the pit's operational area to cope with peak flows and in accordance with organisation's guidelines procedures for pumping of waters from and within the site to achieve plan objectives and regulatory requirements plans for surface drainage and total reticulation network servicing the life of pit according to engineering principles and organisation's guidelines plans for drainage structures and roads according to engineering principles and organisation's guidelines the staged development of civil aspects to the pits development for efficient and effective achievement of the overall development requirements for the supervision of maintenance of the drainage scheme of the site to ensure its ongoing efficiency and effectiveness in achieving the plans objectives site procedures for informing and instructing site personnel on all matters of drainage and reticulation required for the effective and efficient implementation of the plan procedures for the monitoring of site drainage and wastewater treatment processes to ensure achievement of plan goals and regulatory requirements procedures for recording the quality of site drainage effluent to meet regulatory and organisation's requirements water treatment systems to meet specifications procedures for the monitoring of work on hydrological effects and sensitive ecological/conservations sites procedures for the recording and adopting of integrated measures to mitigate hydrological impact and to encourage best practice at the site
Geological data may include:	<ul style="list-style-type: none"> coal, rock and overburden properties faults and joints groundwater springs

Hydrological data may include:	<ul style="list-style-type: none"> • rainfall • surface water, existing streams and dams • catchment areas and runoff characteristics • groundwater and bores • flood predictions
Survey data may include:	<ul style="list-style-type: none"> • site and neighbouring land form • site and neighbouring boundaries and structures • predicted flood levels • water pumping levels • locations of pipes, pumps
Internal and external stakeholders may include:	<ul style="list-style-type: none"> • site and offsite employees • contractors • equipment suppliers • geologists, surveyors and/or draughtspersons • regulatory authorities representatives • community representatives • site neighbours
Resources may include:	<ul style="list-style-type: none"> • financial • labour • materials • services • plant and • equipment

Unit Sector(s)

Water Management

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.