



Australian Government

Department of Education, Employment and Workplace Relations

RIIMEX503A Manage dredging operations

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the managing of dredging operations in resources and infrastructure industries. It includes preparation for, planning, initiating, monitoring and adjusting and reporting on the implementation of dredging operations.

Application of the Unit

This unit is appropriate for those working in a management or technical specialist roles, within:

- Civil construction
- 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 operations	1.1. Access, interpret and apply compliance documentation relevant to the management of dredging operations 1.2. Confirm the relevant geological and survey data 1.3. Access, interpret and clarify the relevant parameters
2. Plan the program	2.1. Involve internal and external stakeholders in the planning process in a way that uses their contribution effectively and gains their support for the outcomes 2.2. Select and identify source of the equipment to be used for the safe, effective and efficient implementation of the dredging plan 2.3. Develop and document the dredging plan in accordance with the dredging operations parameters, the confirmed geological and survey data and relevant requirements and procedures 2.4. Identify and acquire the resources required for the implementation of the dredging plan 2.5. Identify and arrange any training required for personnel involved in the dredging plan 2.6. Prepare and present the dredging plan budget
3. Implement, monitor and adjust the program	3.1. Issue and explain the dredging plan to team members and others involved, for the safe, effective and efficient implementation of the plan 3.2. Provide timely ongoing support and advice to those implementing the dredging plan 3.3. Ensure that the dredge area is correctly marked out in accordance with the dredging plan 3.4. Ensure records and reports are maintained and issued 3.5. Monitor the dredging plan performance against dredge operations parameters, the budget 3.6. Resolve 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 manage dredging operations:

- apply legislative, organisation and site requirements and procedures
- interpret and apply legislative and organisational requirements
- interpret and apply geological and survey data
- provide team leadership
- apply procedures for selection of operational techniques
- apply procedures for selection and assignment of plant and equipment
- develop, initiate and administer 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 manage dredging operations:

- site risk, statutory compliance, health, safety, environmental, quality and communication requirements and procedures
- geological and survey data
- dredging parameters
- pit 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

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 management of dredging operations • implementation of procedures and techniques for the safe, effective and efficient management of dredging operations • 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 dredging operations • consistent successful management of dredging operations
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 to apply in undertaking of the management of dredging operations • 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 to meet the required outcomes • identification of viable options and the selection of dredging options 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 undertake and complete dredging operations • provision of clear and timely required

	support and advice on the dredging operations
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 • codes of practice • Employment and Workplace Relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Geological data may include:	• rock, sand or gravel type and characteristics • deposit strata • deposit bed conditions
Survey data may include:	• limits of extraction • finished surface and sub-surface level and batter requirements • underwater obstacles
Dredging plan parameters may include:	• legislative requirements • development consent requirements • operating hours limitations • required production volumes • existing processing plant capacity • catering for the rock, sand or gravel characteristics • maximum dredging depth • catering for tidal or current conditions • maximum and minimum slurry delivery distances
Internal and external stakeholders may include:	• site and off-site employees • contractors • equipment suppliers • geologists, surveyors and/or draughtspersons • regulatory authorities representatives • community representatives • site neighbours

Selection and identification of the source of equipment may include:	• site geological factors • dredging plan parameters • availability of organisation's equipment • availability of contractors equipment • comparative costs of various options
Dredging plan may cover:	• risk management requirements • occupational health and safety requirements • environmental requirements • limits of extraction area • land clearing and overburden stripping and stockpiling, • raw feed extraction requirements (such as sequencing, cut depths) • bank stability criteria and supervision requirements • raw feed blending requirements • access road and ramp requirements • anchorage and cable management requirements • slurry and tailings line management requirements • power and fuel line management requirements • setting up slurry discharge arrangements (including cyclones) • dewatering and water management requirements and procedures • finished pit shape and face requirements • rehabilitation and environmental works requirements (progressive and final) • tailings deposition/treatment requirements and procedures • reporting and record requirements and procedures
Resources may include:	• financial • labour • materials • services • plant and • equipment

Unit Sector(s)

Materials Extraction

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.