



Australian Government

Department of Education, Employment and Workplace Relations

AHCIRG306A Troubleshoot irrigation systems

Release: 1

AHCIRG306A Troubleshoot irrigation systems

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of troubleshooting faults and blockages in irrigation systems and defines the standard required to: read and apply system specifications, technical manuals and supply/spare parts inventories; locate and identify faulty components and blockages; apply shutdown sequence and isolation procedures; remove faulty components from the system and install replacements; clear blockages or replace blocked sections; and return isolated or shutdown components to service.
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Application of the Unit

Application of the unit	This unit applies to workers on irrigation farms or to irrigation contractors. The work is likely to be carried out under routine supervision within enterprise guidelines.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
1. Locate and identify faulty components and blockages	<p>1.1. Irrigation system and component function is determined by reference to system specifications and technical manuals.</p> <p>1.2. Monitoring and maintenance records are checked and reviewed.</p> <p>1.3. Operational tests are carried out according to system specifications, technical manuals and Occupational Health and Safety (OHS) requirements.</p> <p>1.4. Faulty components and blockages are identified and documented according to enterprise policy and procedures.</p>
2. Shut down/isolate component	<p>2.1. Shut down sequence and isolation procedures are applied as required according to system specifications and technical manuals.</p> <p>2.2. Safe shutdown or isolation is verified.</p> <p>2.3. Safety/security lock off devices and signage is installed according to enterprise policy and procedures.</p>
3. Replace faulty components and clear blockages	<p>3.1. Access to faulty components and blockages is arranged.</p> <p>3.2. Faulty components are removed from the system, according to system specifications and technical manuals, and repaired or disposed of in an environmentally responsible way.</p> <p>3.3. Replaceable components are selected from manufacturer catalogues and procured using enterprise procedures.</p> <p>3.4. Replacement components are installed to meet system specifications according to technical manuals.</p> <p>3.5. Replace faulty components and clear blockages are carried out without unnecessary damage to surrounding site and structures.</p> <p>3.6. Blockages are cleared or blocked sections replaced according to enterprise procedures.</p>
4. Return system to normal operating status	<p>4.1. Isolated or shutdown components are returned to service.</p> <p>4.2. Operational tests are carried out according to system specifications, technical manuals and OHS requirements.</p> <p>4.3. System is returned to normal operational set-up.</p> <p>4.4. Repair activities are reported and recorded according</p>

ELEMENT	PERFORMANCE CRITERIA
	to enterprise policy and procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify adverse environmental impacts of irrigation activities and appropriate remedial action
- operate, maintain and repair irrigation systems
- shut down and isolate components
- replace components
- carry out operational tests
- implement and follow relevant enterprise OHS and environmental policies and procedures
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record information collected accurately and legibly, and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- identification, characteristics and operation of replaceable components of irrigation systems
- system malfunctions and their likely causes
- environmental impacts of irrigation, using water from any ground or underground source
- purchasing procedures
- isolation procedures
- enterprise policies and procedures
- irrigation, OHS and environmental guidelines.

Evidence Guide

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 workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • read and apply system specifications, technical manuals and supply/spare parts inventories • locate and identify faulty components and blockages • apply shutdown sequence and isolation procedures • remove faulty components from the system and install replacements • clear blockages or replace blocked sections • return isolated or shutdown components to service.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
System may include:	<ul style="list-style-type: none"> • pressurised irrigation systems, such as micro-irrigation, spray irrigation or gravity-fed irrigation systems.

Unit Sector(s)

Unit sector	Irrigation
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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