



Australian Government

Department of Education, Employment and Workplace Relations

AHCIRG211A Assist with low volume irrigation operations

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This Unit covers the process of assisting with the operation of low volume irrigation systems under routine supervision and defines the standard required to: identify the purpose of low volume irrigation system components; monitor irrigation times and plant response; maintain low volume irrigation systems; store and maintain equipment; and regulate a low volume irrigation system to achieve and maintain correct emitter output.

Application of the Unit

This Unit applies to working under supervision, within enterprise guidelines.

Licensing/Regulatory Information

Not applicable.

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.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare materials, tools and equipment for low volume irrigation work	1.1 Irrigation equipment is handled safely in accordance with Occupational Health and Safety (OHS) practices 1.2 Irrigation components are checked and action taken, as required, in accordance with enterprise policy and procedures 1.3 Water outlets are checked in accordance with enterprise practices
2 Undertake low volume irrigation work as directed	2.1 Valves are opened and shut, as necessary, in accordance with enterprise procedures 2.2 Required pressures and water flows are achieved and maintained to ensure sufficient water availability 2.3 Equipment is relocated, if necessary, in accordance with enterprise procedures and OHS guidelines
3 Observe and report on soil moisture and plant growth response	3.1 Soil moisture levels are assessed to determine watering requirement 3.2 Plant moisture requirements and signs of stress are established 3.3 Plant growth and condition is monitored to indicate over or under watering 3.4 Inadequate plant response to watering is recorded and reported
4 Maintain a low volume irrigation system	4.1 Flushing procedures are followed for clearing the system 4.2 Emitters are checked for serviceability and output 4.3 Lines are maintained 4.4 Water supply and pumping system is checked periodically 4.5 Maintenance records are kept up to date

Required Skills and Knowledge

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

Required skills include:

Ability to:

- prepare materials, tools and equipment for irrigation work
- assemble and join low volume irrigation system components
- operate and adjust low volume irrigation components
- operate a simple irrigation controller
- operate the water delivery system, including pumps
- estimate water output
- observe for leaks and faulty emitters
- report faults
- record and report maintenance activities clean up on completion of work.

Required knowledge includes:

Knowledge of:

- purpose and principles of low volume irrigation
- identification, characteristics and operation of replaceable components of low volume irrigation systems
- basic operational procedures for low volume irrigation systems
- principles of pumps and pumping systems
- the range of emitters and their output and purpose
- system malfunctions and their likely causes
- environmental impacts of irrigation, using water from any ground or underground source
- OHS requirements and safe work procedures.

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 workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following: • identify the purpose of low volume irrigation system components • monitor irrigation times and plant response • maintain low volume irrigation systems • store and maintain equipment • regulate a low volume irrigation system to achieve and maintain correct emitter output.
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

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.	
Low volume irrigation systems include:	systems that operate under comparatively low volume and pressure including micro irrigation, pop-ups at less than 0.1 litres/second, and drippers.

Unit Sector(s)

Irrigation