



Australian Government

AHCIRG348 Operate and maintain moving irrigation system

Release: 1

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Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency covers the skills and knowledge required to install, operate and maintain moving irrigation systems.

The unit applies to individuals who operate and maintain moving irrigation systems under broad direction and take responsibility for their own work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Irrigation (IRG)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Install a moving sprinkler irrigation system	<p>1.1 Confirm activity to be undertaken, including identifying potential hazards and risks and implementing safe working practices to manage risks</p> <p>1.2 Select and use required materials, tools and equipment and check for safe operations</p> <p>1.3 Select, fit, use and maintain safety and personal protective equipment applicable to the task</p> <p>1.4 Join span pipes with correctly tensioned bolts to specifications</p>

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Connect V-jack trusses in sequence to bow the span 1.6 Connect goose necks and hose connectors 1.7 Fit pre-cut drop hoses and connect sprinklers
2. Complete assembly of moving sprinkler components	2.1 Assemble sprinklers, pressure regulators and hose directors to specifications 2.2 Fit gear box and control panel 2.3 Fit and tension wheels
3. Commission a moving sprinkler irrigation system	3.1 Connect and start pumping system and flush as required 3.2 Calibrate testing and monitoring equipment according to operation and maintenance manual and manufacturer specifications
4. Operate the system	4.1 Prime pumps, open or close valves and controls and begin the start-up sequence 4.2 Check emitter spacing 4.3 Monitor and service transport mechanism 4.4 Check irrigation controller for programming and efficiency 4.5 Correct or repair all malfunctions, leaks and blockages
5. Monitor irrigation operation	5.1 Implement irrigation schedule and monitor soil profile for wetting 5.2 Measure sprinkler performance using catch cans 5.3 Measure flow rates using containers of known volume 5.4 Measure operating pressures using pressure gauges 5.5 Check irrigated area for wheel ruts and other signs of waterlogging
6. Carry out system maintenance	6.1 Record damage and blockages with contaminants by damage type, location and the section of the system affected 6.2 Record and report damaged or faulty pumps, valves, sprinklers, electrical components and computer control systems and take action to effect repairs 6.3 Measure outlet pressure, flow rate and energy use and record 6.4 Inspect and maintain drive mechanism, frames and trusses 6.5 Implement end of season maintenance procedures 6.6 Implement routine and preventative maintenance procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	6.7 Implement storage procedures for irrigation components
7. Shut down the system in response to irrigation indicators	7.1 Apply water for sufficient time to achieve required soil moisture levels and allowing for weather conditions 7.2 Shut down system components and drain 7.3 Check drainage and treatment systems 7.4 Record and report irrigation activities according to workplace recording procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations
Writing	<ul style="list-style-type: none"> Use correct terminology to document moving irrigation system damage and blockages, and irrigation activities
Oral communication	<ul style="list-style-type: none"> Initiate discussions with supervisor using clear language to communicate damage and blockages and report irrigation activities
Numeracy skills	<ul style="list-style-type: none"> Interpret testing equipment estimate of sprinkler performance, water flow rates and pressures Interpret testing equipment estimate of outlet pressure, flow rate and energy use
Navigate the world of work	<ul style="list-style-type: none"> Recognise and follow workplace requirements, including safety requirements, associated with own role and area of responsibility
Interact with others	<ul style="list-style-type: none"> Use appropriate language and communication skills to disseminate information about system damage and blockages

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCIRG348 Operate and maintain moving irrigation system	AHCIRG335 Operate and maintain moving irrigation system	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>